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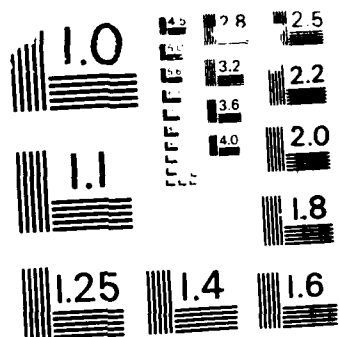
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

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NATIONAL BUREAU OF STANDARDS - 1963-A

AD-A190 442

DCN 87-212-027-27-01

INSTALLATION RESTORATION PROGRAM  
PHASE II - CONFIRMATION/QUANTIFICATION  
STAGE 1

FINAL REPORT  
FOR  
AIR FORCE PLANT 4  
FORT WORTH, TEXAS

VOLUME 2. APPENDIX A-1

HEADQUARTERS AERONAUTICAL SYSTEMS DIVISION  
FACILITIES MANAGEMENT DIVISION (ASD/PMDA)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-6503

AND

HEADQUARTERS, AIR FORCE SYSTEMS COMMAND  
COMMAND BIOENVIRONMENTAL ENGINEER (AFSC/SGPB)  
ANDREWS AIR FORCE BASE, DC 20334-5000

DECEMBER 1987

PREPARED BY  
RADIAN CORPORATION  
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AUSTIN, TEXAS 78720-1088

USAF CONTRACT NO. F33615-83-D-4001 DELIVERY ORDER 27  
RADIAN CONTRACT NO. 212-027-27

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USAF OEH TECHNICAL PROGRAM MANAGERS  
MAJOR GEORGE R. NEW  
CAPTAIN ARTHUR S. KAMINSKI

UNITED STATES AIR FORCE  
OCCUPATIONAL & ENVIRONMENTAL HEALTH LABORATORY (USAF OEH)  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

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APPENDIX A-1  
Groundwater Analytical Data

Methyl ethyl ketone analysis was performed by Radian chromatography laboratory. The results of the analysis are in a memo included in this volume. All other samples for chemical analysis were submitted to Radian Analytical Services Laboratory. The samples were logged in, and the data reported in "batches". Each batch submitted was assigned a RAS work order number. Volume 2, Volume 3, and Volume 4, Appendix A-1 contain the analytical data reports for the various batches of samples. The bulk of data necessitated the results be bound in three volumes. Volume 2, Volume 3, and Volume 4, Appendix A-1 contain Tables A.1-1, A.1-3, and A.1-5, respectively, which are a sequential listing of the reports contained in that volume by batch number and Tables A.1-2, A.1-4, and A.1-6, respectively, which are a sample log and cross-reference table. These tables serve as a sample log and cross-references well numbers, OEHL numbers and the RAS work order numbers under which the results are located.

Pages in Appendix A are numbered by the volume number followed by the page number of that volume. For example, Page 2 001 is the first chemistry data page of Volume 2.

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TABLE A.1-1. INDEX OF ANALYTICAL REPORTS, BY WORK ORDER NUMBER

Volume 2	Volume 3	Volume 4
86-01-239	86-02-067	86-02-169
86-01-240	86-02-070	86-02-176
86-01-242	86-02-075	86-02-179
86-02-001	86-02-078	86-02-197
86-02-004	86-02-079	86-02-198
86-02-015	86-02-087	86-03-002
86-02-016	86-02-091	86-03-003
86-02-019	86-02-100	86-03-004
86-02-030	86-02-109	86-03-018
86-02-031	86-02-113	86-03-021
86-02-038	86-02-120	86-04-069
86-02-041	86-02-122	86-04-070
86-02-044	86-02-123	86-04-084
86-02-047	86-02-132	86-04-085
86-02-058	86-02-138	86-04-135
86-02-060	86-02-139	86-04-164
	86-02-152	86-07-086
	86-02-159	86-07-088
		86-07-095
		86-08-034
		86-08-058
		86-08-078
		86-08-092
		86-08-093
		86-08-094
		86-08-095
		86-08-096

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TABLE A.1-2. GROUNDWATER AND SURFACE WATER SAMPLE LOG AND CROSS-REFERENCE TABLE

Well or Soil Boring Number	OEHL Number	Date Sampled	RAS Work			Comments
			Order Number	Date Extracted	Date Analyzed	
HM-2	860184	2/20/86	86-02-138			
			86-02-138			
			86-02-132	2/24/86	3/6/86	
			86-02-132	2/24/86	3/6/86	
HM-5	860152	2/12/86	86-02-139			
			86-02-075			
			86-02-075			
			86-02-078	2/13/86	2/27/86	
HM-7	860162	2/13/86	86-02-078	2/13/86	2/27/86	
			86-02-079			
			86-02-087			
			86-02-087			
HM-8	860161	2/13/86	86-02-091	2/17/86	3/5/86	
			86-02-091	2/17/86	3/5/86	
			86-02-087			
			86-02-087			
HM-9	860206	2/27/86	86-02-197			
			86-02-197			
			86-02-198	3/3/86	3/13/86	
			86-02-198	3/3/86	3/13/86	
HM-10	860137	2/7/86	86-02-047			
			86-02-047			
			86-02-044	2/10/86	2/25/86	
			86-02-044	2/10/86	2/25/86	
HM-11	860146	2/10/86	86-02-060			
			86-02-060			
			86-02-058	2/12/86	2/26/86	
			86-02-058	2/12/86	2/26/86	
HM-12	860165	2/14/86	86-02-100			
			86-02-100			
			86-02-109	2/18/86	3/5/86	
			86-02-109	2/18/86	3/5/86	
HM-13	860178	2/19/86	86-02-120			
			86-02-120			
			86-02-122	2/20/86	3/5/86	
			86-02-122	2/20/86	3/5/86	
HM-14	860177	2/19/86	86-02-120			
			86-02-120			
			86-02-159			
			86-02-159			
HM-15	860193	2/25/86	86-02-159			
			86-02-159			
			86-02-159			
			86-02-159			

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-16	860147	2/11/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-067 86-02-067 86-02-070 86-02-067	2/12/86 2/12/86	2/27/86 2/27/86	
HM-17	860149	2/11/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-067 86-02-067 86-02-070 86-02-070 86-02-067	2/12/86 2/12/86	2/27/86 2/27/86	
HM-18	860150	2/11/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-067 86-02-067 86-02-070 86-02-070 86-02-067	2/12/86 2/12/86	2/27/86 2/27/86	
HM-19	860217	3/1/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-03-003 86-03-003 86-03-004	2/12/86 2/12/86	2/27/86 2/27/86	
HM-20	860109	1/31/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-004 86-02-001 86-02-001 86-02-004 86-02-004 86-02-001	2/3/86 2/3/86	2/12/86 2/12/86	
HM-21	860138	2/7/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047 86-02-044 86-02-044 86-02-047	2/10/86 2/10/86	2/25/86 2/25/86	
HM-22	860181	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-132	2/24/86 2/24/86	3/6/86 2/6/86	
HM-23	860174	2/18/86	Oil and Grease	86-02-113			
HM-24	860176	2/19/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-113 86-02-120 86-02-120 86-02-122 86-02-122 86-02-120	2/20/86 2/20/86	3/6/86 3/6/86	
HM-25	860148	2/11/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-067 86-02-067 86-02-070 86-02-070 86-02-067	2/12/86 2/12/86	2/27/86 2/27/86	

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-26	860112	1/31/86	Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/11/86	Duplicate analysis
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/11/86	
			B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/11/86	Duplicate analysis
HM-27	860113	1/31/86	B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	
			Metals	86-02-001			
			Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	
HM-28	860132	2/6/86	B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	
			Metals	86-02-001			
			Halogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/24/86	
HM-28	860133	2/6/86	B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/24/86	
			Metals	86-02-041			
			Pesticides and PCBs (608)	86-02-038			
			B/N & Acid Semi-vol. (625)	86-02-038			
			Hydrogenated vols. (601)	86-02-138	2/10/86	2/25/86	Duplicate of 860132
HM-29	860189	2/21/86	Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-152	2/25/86	3/11/86	
			B/N & Acid Semi-vols. (625)	86-02-152	2/25/86	3/11/86	
			Metals	86-02-139			
			Oil and Grease	86-02-139			
HM-30	860163	2/13/86	Hydrocarbon Fuels	86-02-139			
			Hydrogenated vols. (601)	86-02-087			
			Aromatic vols. (602)	86-02-087			
			Pesticides & PCBs (608)	86-02-091	2/17/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-091	2/17/86	3/5/86	
HM-31	860166	2/14/86	Metals	86-02-087			
			Hydrogenated vols. (601)	86-02-100			
			Aromatic vols. (602)	86-02-100			
			Pesticides & PCBs (608)	86-02-109	2/18/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-109	2/18/86	3/5/86	
HM-32	860164	2/14/86	Metals	86-02-100			
			Oil and Grease	86-02-100			
			Hydrocarbon Fuels	86-02-100			
			Hydrogenated vols. (601)	86-02-100			
			Aromatic vols. (602)	86-02-100			
HM-33	860207	2/28/86	Pesticides & PCBs (608)	86-02-109	2/18/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-109	2/18/86	3/5/86	
			Metals	86-02-100			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
HM-33	860207	2/28/86	Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Oil and Grease	86-03-004			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-33	860208	2/28/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-03-002 86-03-002 86-03-004			Duplicate of 860207
HM-34	860204	2/27/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-004 86-02-197 86-02-197 86-02-198 86-02-196 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-34	860205	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86		Duplicate of 860204
HM-35	860203	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-36	860202	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-37	860114	1/31/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-001 86-02-001 86-02-004 86-02-004 86-02-001	2/3/86 2/3/86	2/12/86 2/12/86	
HM-38	860188	2/21/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-152 86-02-152 86-02-197	2/25/86 2/25/86	3/10/86 3/10/86	
HM-39	860201	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-40	860194	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/27/86	3/12/86 3/11/86	
HM-41	860192	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/27/86	3/12/86 3/12/86	



TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-42	860183	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-139	2/24/86 2/24/86	3/6/86 3/6/86	
HM-43	860182	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-139	2/24/86 2/24/86	3/6/86 3/6/86	
HM-44	860190	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/20/86	3/12/86 3/12/86	
HM-45	860191	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/27/86	3/12/86 3/12/86	
HM-46	860185	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-132 86-02-139	2/24/86 2/24/86	3/6/86 3/6/86	
HM-47	860130	2/6/86	Halogenated vols. (601) Aromatic vols. (602) Metals Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Metals	86-02-041 86-02-041 86-02-041 86-02-041 86-02-041 86-02-041 86-02-041			Duplicate of 860130
HM-48	860167	2/14/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Chromium	86-02-041 86-02-041 86-02-100 86-02-100 86-02-075			
HM-49	860156	2/12/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-075 86-02-075 86-02-079 86-02-079 86-02-075 86-02-075 86-02-079			
HM-50	860157	2/12/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease Hydrocarbon Fuels	86-02-075 86-02-075 86-02-079 86-02-079 86-02-079			

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-51	860151	2/11/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-067 86-02-067 86-02-067			
HM-52	860141	2/10/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-060 86-02-060 86-02-058 86-02-058 86-02-060 86-02-060	2/12/86 2/12/86	2/26/86 2/26/86	
HM-52	860142	2/10/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Metals	86-02-060 86-02-060 86-02-060 86-02-060 86-02-060			Duplicate of 860141
HM-53	860145	2/10/86	Hydrocarbon Fuels	86-02-060			
HM-54	860143	2/10/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-060 86-02-060 86-02-060 86-02-058 86-02-058 86-02-060	2/12/86 2/12/86	2/26/86 2/26/86	
HM-54	860144	2/10/86	Hydrocarbon Fuels Pesticides and PCBs (608) B/N & Acid Semi-vols. (625)	86-02-060 86-02-058 86-02-058	2/12/86 2/12/86	2/26/86 2/26/86	Duplicate of 860143
HM-55	860119	2/4/86	Hydrocarbon Fuels Oil and Grease	86-02-123 86-02-019			
HM-56	860186	2/21/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-152 86-02-152 86-02-139	2/25/86 2/25/86	3/10/86 3/10/86	
HM-57	860200	2/26/86	Hydrocarbon Fuels Purgeables (624) Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-139 86-02-152 86-02-176 86-02-176 86-02-179 86-02-179 86-02-176	2/28/86 2/28/86	3/12/86 3/12/86	
HM-58	860195	2/26/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-176 86-02-176 86-02-176 86-02-176 86-02-179 86-02-179 86-02-176	2/28/86 2/28/86	3/12/86 3/12/86	
			Oil and Grease Hydrocarbon Fuels	86-02-176 86-02-176			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work			Comments
				Order Number	Date Extracted	Date Analyzed	
HM-58	860196	2/26/86	Hydrogenated vols. (601)	86-02-176			Duplicate of 860195
			Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-179			
			B/N & Acid Semi-vols. (625)	86-02-179			
			Metals	86-02-176			
HM-59	860113	2/3/86	Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-015			
			Aromatic vols. (602)	86-02-015			
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	
			B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	
			Metals	86-02-015			
			Oil and Grease	86-02-015			
			Hydrocarbon Fuels	86-02-015			
			Halogenated vols. (601)	86-02-041			
HM-60	860134	2/6/86	Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/25/86	
			Metals	86-02-041			
			Hydrogenated vols. (601)	86-02-176			
HM-61	860198	2/26/86	Aromatic vols. (602)	86-02-176			
			Metals	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Hydrogenated vols. (601)	86-03-003			
HM-62	860216	3/1/86	Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
			Halogenated vols. (601)	86-02-047			
HM-63	860138	2/7/86	Aromatic vols. (602)	86-02-047			
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-044	2/10/86	2/25/86	
			Metals	86-02-047			
			Hydrogenated vols. (601)	86-02-176			
HM-64	860197	2/26/86	Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-179	2/28/86	3/12/86	
			B/N & Acid Semi-vols. (625)	86-02-179	2/28/86	3/12/86	
			Metals	86-02-176			
			Oil and Grease	86-02-176			
HM-65	860158	2/12/86	Hydrocarbon Fuels	86-02-176			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Oil and Grease	86-02-079			
			Hydrocarbon Fuels	86-02-079			

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-66	860159	2/13/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-087 86-02-087 86-02-087			
HM-68	860209	2/28/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-002 86-03-002 86-03-018 86-03-018 86-03-004	3/6/86 3/6/86	3/24/86 3/24/86	
HM-69	860187	2/21/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-03-004 86-03-004 86-02-138 86-02-138 86-02-139			
HM-70	860179	2/19/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-02-139 86-02-139 86-02-120 86-02-120 86-02-120			
HM-70	860180	2/19/86	Oil and Grease Hydrocarbon Fuels Purgeables (624) Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-02-120 86-02-120 86-02-152 86-02-120 86-02-120 86-02-120			Duplicate of 860179
HM-71	860116	2/3/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-120 86-02-120 86-02-015 86-02-015 86-02-016 86-02-016 86-02-015	2/4/86 2/4/86	2/14/86 2/14/86	
HM-72	860168	2/14/86	Oil and Grease Hydrocarbon Fuels Oil and Grease	86-02-015 86-02-015 86-02-100			
HM-73	860199	2/26/86	Xylene Methyl ethyl ketone Oil and Grease	86-02-100 9/8/86 memo 86-02-176			
HM-74	860129	2/5/86	Xylene Methyl ethyl ketone Oil and Grease	86-02-176 9/8/86 memo 86-02-031			
HM-75	860173	2/18/86	Xylene Methyl ethyl ketone Oil and Grease Xylene Methyl ethyl ketone	86-02-031 9/8/86 memo 86-02-113 86-02-113 9/8/86 memo			

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-76	860160	2/13/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-087 86-02-087 86-02-087			
HM-77	860135	2/6/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-041 86-02-041 86-02-038 86-02-038 86-02-041	2/10/86 2/10/86	2/25/86 2/25/86	
HM-78	860127	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602)	86-02-100 86-02-100 86-02-031 86-02-031			
HM-79	860117	2/3/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-031 86-02-015 86-02-015 86-02-016 86-02-015	2/4/86 2/4/86	2/14/86 2/14/86	
HM-80	860128	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602)	86-02-015 86-02-015 86-02-031 86-02-031			
HM-81	860140	2/7/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047 86-02-047 86-02-044 86-02-044 86-02-047	2/10/86 2/10/86	2/25/86 2/25/86	
HM-82	860121	2/4/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047 86-02-047 86-02-019 86-02-019 86-02-030 86-02-030 86-02-019	2/6/86 2/6/86	2/16/86 2/16/86	
HM-83	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-019 86-02-019 86-08-093 86-08-093 86-08-034 86-08-034 86-08-095			
			Oil and Grease Hydrocarbon Fuels Alpha Beta Gamma	86-08-095 86-08-095 86-08-096 86-08-096 86-08-096			

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-84	860261	8/21/86	Hydrogenated vols. (601)	86-08-093			
			Aromatic vols. (602)	86-08-093			
			Pesticides & PCBs (608)	86-08-034			
			B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Oil and Grease	86-08-095			
			Hydrocarbon Fuels	86-08-095			
			Alpha	86-08-096			
			Beta	86-08-096			
			Gamma	86-08-096			
HM-85	860259	8/21/86	Hydrogenated vols. (601)	86-08-093			
			Aromatic vols. (602)	86-08-093			
			Pesticides & PCBs (608)	86-08-034			
			B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Oil and Grease	86-08-095			
			Hydrocarbon Fuels	86-08-095			
			Alpha	86-08-096			
			Beta	86-08-096			
			Gamma	86-08-096			
HM-85	860260	8/21/86	Pesticides & PCBs (608)	86-08-034			Duplicate of 860259
			B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Alpha	86-08-096			
			Beta	86-08-096			
			Gamma	86-08-096			
			Hydrocarbon Fuels	86-04-084			
			Hydrogenated vols. (601)	86-04-164			
			Aromatic vols. (602)	86-04-164			
			Pesticides & PCBs (608)	86-04-135			
HM-100 HM-101	860226 860228	4/11/86 4/18/86	B/N & Acid Semi-vols. (625)	86-04-135	4/23/86	4/28/86	
			Metals	86-04-164	4/23/86	4/28/86	
			Hydrocarbon Fuels	86-04-164			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			
			Chromium	86-04-084			
HM-102	860220	4/9/86	Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
HM-103	860224	4/10/86	Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-104	860222	4/10/86	Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-04-084 86-04-084 86-04-084			
HM-105	860230	8/19/86	Oil and Grease Hydrocarbon Fuels	86-04-084 86-08-078			
HM-107	860229	4/19/86	Oil and Grease Hydrocarbon Fuels	86-08-078 86-08-078			
HM-108	860256	8/20/86	Oil and Grease Hydrocarbon Fuels	86-08-078 86-08-094			
P-1	860126	2/6/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-08-094 86-02-041 86-02-041 86-02-038 86-02-038 86-02-041	2/10/86 2/10/86	2/24/86 2/24/86	
P-2	860175	2/19/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-120 86-02-120 86-02-122 86-02-122 86-02-120	2/20/86 2/20/86	3/6/86 3/6/86	
P-3	860123	2/4/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Oil and Grease	86-02-019 86-02-019 86-02-030 86-02-030 86-02-019	2/6/86 2/6/86	2/16/86 2/16/86	
P-4	860108	1/30/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Oil and Grease	86-02-019 86-01-239 86-01-239 86-01-242 86-01-242			
P-5u	860111	1/31/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-001 86-02-001 86-02-004 86-02-004 86-02-001	1/31/86 1/31/86	2/11/86 2/11/86	
P-5m	860110	1/31/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-001 86-02-001 86-02-001 86-02-004 86-02-004 86-02-001	2/3/86 2/3/86	2/11/86 2/11/86	
P6u	860122	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-001 86-02-001 86-02-001 86-02-004 86-02-004 86-02-001	2/3/86 2/3/86	2/11/86 2/11/86	

(continued)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-6m	860118	2/4/86	Hydrocarbon Fuels Oil and Grease	86-02-123			
				86-02-019			
P-7u	860104	1/30/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/11/86 2/11/86	
P-7m	860103	1/30/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/7/86 2/7/86	
P-8u	860136	2/7/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047 86-02-047 86-02-044 86-02-044 86-02-047	2/10/86 2/10/86	2/25/86 2/24/86	
P-8m	860120	2/4/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-047 86-02-047 86-02-019 86-02-019 86-02-030 86-02-030 86-02-019	2/6/86 2/6/86	2/16/86 2/16/86	
P-9u	860125	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-019 86-02-019 86-02-031 86-02-031 86-02-030 86-02-030 86-02-031	2/6/86 2/6/86	2/16/86 2/16/86	
P-9m	860124	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-031 86-02-031 86-02-031 86-02-031 86-02-030 86-02-030 86-02-031	2/6/86 2/6/86	2/16/86 2/21/86	
P-10u	860169	2/14/86	Oil and Grease Hydrocarbon Fuels Metals Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-031 86-02-031 86-01-240 86-02-113 86-02-113 86-02-116 86-02-116 86-02-113	2/24/86 2/24/86	3/6/86 3/6/86	



TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-10u	860172	2/18/86	Hydrogenated vols. (601)	86-02-113			Duplicate of 860169
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/20/86	3/7/86	
			B/N & Acid Semi-vols. (625)	86-02-116	2/20/86	3/7/86	
			Metals	86-02-113			
P-10m	860170	2/18/86	Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/24/86	3/4/86	
P-10m	860171	2/18/86	B/N & Acid Semi-vols. (625)	86-02-116	2/24/86	3/6/86	Duplicate of 860170
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
P-11u	860210	2/28/86	Aromatic vols. (602)	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
P-11m	860212	2/28/86	B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
P-11m	860211	2/28/86	Aromatic vols. (602)	86-03-002			Duplicate of 860212
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
P-12u	860213	3/1/86	Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
P-12u	860213	3/1/86	Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-003			
			Aromatic vols. (602)	86-03-003			
P-12u	860213	3/1/86	Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-12m	860214	3/1/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals Oil and Grease	86-03-003 86-03-003 86-03-021 86-03-021 86-03-004 86-03-004	3/5/86 3/5/86	3/24/86 3/24/86	
P-12m	860215	3/1/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals Oil and Grease	86-03-004 86-03-003 86-03-003 86-03-021 86-03-021 86-03-004 86-03-004	3/5/86 3/5/86	3/24/86 3/24/86	Duplicate of 860214
P-20m	860218	4/9/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-004 86-03-004 86-04-069 86-04-069 86-04-070 86-04-070	4/10/86 4/10/86	4/23/86 4/23/86	
P-20m	860219	4/9/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-069 86-04-069 86-04-069 86-04-070 86-04-069	4/10/86 4/10/86	4/23/86 4/23/86	Duplicate of 860218
P-21u	860221	4/10/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-084 86-04-084 86-04-085 86-04-085 86-04-084	4/14/86 4/14/86	4/24/86 4/24/86	
P-22u	860223	4/10/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-084 86-04-084 86-04-085 86-04-085 86-04-084	4/14/86 4/14/86	4/22/86 4/22/86	
P-23u	860225	4/8/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-164 86-04-164 86-04-135 86-04-135 86-04-164	4/23/86 4/23/86	4/28/86 4/28/86	
P-23u	860257	8/21/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-08-093 86-08-093 86-08-034 86-08-034 86-08-095			
C-1	860100	1/29/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/7/86 2/7/86	

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
C-2	860102	1/29/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/7/86 2/7/86	
C-3	860105	1/30/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/11/86 2/11/86	
C-4	860107	1/30/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86		
C-5	860101	1/29/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/7/86 2/7/86	
Creek Seep	860106	1/30/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/7/86 2/7/86	
Drain Pipe	860153	2/12/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-075 86-02-075 86-02-078 86-02-078 86-02-079	2/13/86 2/13/86	2/27/86 2/27/86	
French Drain 1	860154	2/12/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-075 86-02-075 86-02-078 86-02-078 86-02-079	2/13/86 2/13/86	2/28/86 2/28/86	
French Drain 2	860155	2/12/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-085 86-02-075 86-02-078 86-02-078 86-02-079	2/13/86 2/13/86	2/28/86 2/28/86	
Outfall #1	860246	8/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-092 86-08-094 86-08-094			(1030)
Outfall #1	860247	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-092 86-08-092 86-08-094			(1130)

TABLE A.1-2. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
Outfall #1	860248	8/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-092 86-08-092 86-08-094		(1230)	
Outfall #1	860249	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-094 86-08-094		(1330)	
Outfall #1	860250	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094			
Outfall #1	860251	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-094 86-08-094		(1530)	
Outfall #1	860252	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-094 86-08-094		(1630)	
Outfall #1	860253	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-094 86-08-094		(1730)	
Outfall #1	860254	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-094 86-08-094		Composite (1030-1730)	
Outfall #1	860255	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-094 86-08-094		(1730) Duplicate of 860254	
Outfall #5	860237	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(0930)	
Outfall #5	860238	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(Composite 0930-0530)	
Outfall #5	860239	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1130)	
Outfall #5	860240	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1230)	
Outfall #5	860241	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1330)	
Outfall #5	860242	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1430)	
Outfall #5	860243	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1530)	
Outfall #5	860244	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1630)	
Outfall #5	860245	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1730)	

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Analytical Serv  
02/20/86 16:50:41

LAB # 86-01-239

REPORT Radian  
TO B1 4  
Austin  
ATTN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTN  
PHONE (512) 454-4797

*Carl Smith*  
CERTIFIED BY

CONTACT CONOVER

\*\*Unknown compound eluting here.  
Second column confirmation performed for EPA 601 on -06A and -09A.

WORK ID site 1, landfill 1 (VDC)  
TAKEN NR  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-  
INVOICE under separate cover

## Footnotes and Comments

- \* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.
- @ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

01	860100
02	860102
03	860105
04	860107
05	860101
06	860108
07	860103
08	860104
09	860106

## Analytical Serv TEST CODES and NAMES used on this report

GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-239

SAMPLE ID 860100

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/29/86

Category

DATA FILE	CONC. FACTOR	G	DATE INJECTED	01/31/86	ANALYST	MCL	INSTRUMENT	VERIFIED BY	MCL	COMPOUNDS DETECTED	Q
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT						
—	Chloromethane	ND	—	Trichloroethene	ND						
—	Bromomethane	ND	—	Dibromochloromethane	*						
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane	*						
—	Chloroethane	ND	—	cis-1,3-Dichloropropene	*						
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND						
—	Trichlorofluoromethane	ND	—	Bromoform	ND						
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane	#						
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene	#						
—	trans-1,2-Dichloroethene	ND	—	Chlorobenzene	ND						
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND						
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND						
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND						
—	Carbon Tetrachloride	ND	—								
—	Bromodichloromethane	ND	—								
—	1,2-Dichloropropane	ND	—								
—	trans-1,3-Dichloropropene	ND	—								



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SAMPLE ID 860100

Analytical Serv  
Results by Sample

LAB # 86-01-239  
Continued From Above

FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 01/29/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-01-239

SAMPLE ID 860100

FRACTION 01C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/29/86 Category

DATA FILE: \_\_\_\_\_ D DATE INJECTED 02/03/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



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Results by Sample

LAB # 86-01-239

SAMPLE ID 860102

FRACTION 02A

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 01/29/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 01/31/86  
CONC. FACTOR \_\_\_\_\_ANALYST \_\_\_\_\_ MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ g COMPOUNDS DETECTED 4

VERIFIED BY MCL

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	3	Trichloroethene	0.25
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
1	Methylene Chloride	1.57	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	4	Tetrachloroethylene #	0.07
2	trans-1,2-Dichloroethene	7.11	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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SAMPLE ID 860102  
Analytical Serv Results by Sample REPORT  
LAB # 86-01-239 Continued From Above  
FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 01/29/86 Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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 Analytical Serv REPORT  
 Results by Sample

LAB # 86-01-239

SAMPLE ID 860102  
 FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC  
 Date & Time Collected 01/29/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/03/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
 CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.  
 SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-01-239

SAMPLE ID 860105

FRACTION 03A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

DATA FILE	G	DATE INJECTED	01/31/86	ANALYST	RP	VERIFIED BY	MCL
CONC. FACTOR				INSTRUMENT	g	COMPOUNDS DETECTED	2
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND	2	Trichloroethene	0.73		
	Bromomethane	ND		Dibromochloromethane *	ND		
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND		
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND		
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND		
	Trichlorofluoromethane	ND		Bromoform	ND		
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND		
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND		
1	trans-1,2-Dichloroethene	5.84		Chlorobenzene	ND		
	Chloroform	ND		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND		
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

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 SAMPLE ID 860105  
 Analytical Serv  
 Results by Sample  
 FRACTION 03A  
 TEST CODE GC 601  
 NAME EPA Method 601/GC  
 Date & Time Collected 01/30/86  
 Category  
 LAB # 86-01-239  
 Continued From Above

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-239

SAMPLE ID 860105

FRACTION Q3C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 01/30/86

Category

DATA FILE \_\_\_\_\_ D  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/03/86

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ d

VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED Q

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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REPORT

Results by Sample

LAB # 86-01-239

SAMPLE ID 860107

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 01/31/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ g COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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Analytical Serv  
 Results by Sample

REPORT  
 LAB # 86-01-239  
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FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 01/30/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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Results by Sample

LAB # 86-01-239

SAMPLE ID 860107

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/30/86 Category

DATA FILE        D DATE INJECTED 02/03/86 ANALYST        MCL        VERIFIED BY MCL         
CONC. FACTOR        INSTRUMENT        d COMPOUNDS DETECTED        Q

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>      </u>	Benzene	<u>ND :</u>	<u>      </u>	1,4-Dichlorobenzene	<u>ND</u>
<u>      </u>	Toluene	<u>ND :</u>	<u>      </u>	1,3-Dichlorobenzene	<u>ND</u>
<u>      </u>	Ethyl Benzene	<u>ND :</u>	<u>      </u>	1,2-Dichlorobenzene	<u>ND</u>
<u>      </u>	Chlorobenzene	<u>ND :</u>	<u>      </u>		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in        ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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REPORT

Results by Sample

LAB # 86-01-239

SAMPLE ID 860101

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/29/86

Category

DATA FILE \_\_\_\_\_ G \_\_\_\_\_ DATE INJECTED 01/31/86

CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

RP \_\_\_\_\_  
g

VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

LAB # 86-01-239

Results by Sample

Continued From Above

SAMPLE ID 860101

FRACTION 05A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/29/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-01-239

SAMPLE ID 860101

FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/29/86 Category

DATA FILE \_\_\_\_\_ D  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/03/86

ANALYST \_\_\_\_\_ RP  
INSTRUMENT \_\_\_\_\_ d

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Results by Sample

LAB # 86-01-239

SAMPLE ID 860108

FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 01/30/86

Category

DATA FILE            G DATE INJECTED 01/31/86  
CONC. FACTOR           

ANALYST            RP            VERIFIED BY MCL  
INSTRUMENT            9 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	Trichloroethene	ND
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	328**	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND			
—	Bromodichloromethane	ND			
—	1,2-Dichloropropane	ND			
—	trans-1,3-Dichloropropene	ND			

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Analytical Serv  
Results by Sample

REPORT  
Continued From Above

LAB # 86-01-239

FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 01/30/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-01-239

Results by Sample

SAMPLE ID 860108

FRACTION 06C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/30/86 Category

DATA FILE D DATE INJECTED 02/03/86 ANALYST RP VERIFIED BY MCL  
CONC. FACTOR 1 INSTRUMENT d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

REPORT

LAB # 86-01-239

SAMPLE ID 860103

FRACTION 07A  
Date & Time Collected 01/30/86

TEST CODE GC 601 NAME EPA Method 601/GC  
Category

DATA FILE	CONC	FACTOR	G	DATE INJECTED	01/31/86	ANALYST INSTRUMENT	RP	VERIFIED BY	MCL
							9		COMPOUNDS DETECTED
									3
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT				
	Chloromethane	ND	3	Trichloroethene	0.13				
	Bromomethane	ND		Dibromochloromethane *	ND				
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND				
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND				
1	Methylene Chloride	6.70		2-Chloroethylvinyl Ether	ND				
	Trichlorofluoromethane	ND		Bromoform	ND				
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND				
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND				
2	trans-1,2-Dichloroethene	3.16		Chlorobenzene	ND				
	Chloroform	ND		1,3-Dichlorobenzene	ND				
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND				
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND				
	Carbon Tetrachloride	ND							
	Bromodichloromethane	ND							
	1,2-Dichloropropane	ND							
	trans-1,3-Dichloropropene	ND							



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 SAMPLE ID 860103  
 Analytical Serv  
 Results by Sample  
 REPORT  
 LAB # 86-01-239  
 Continued From Above  
 FRACTION 07A  
 TEST CODE GC 601  
 NAME EPA Method 601/GC  
 Date & Time Collected 01/30/86  
 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-239

SAMPLE ID 860103

FRACTION 07C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 01/30/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/03/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-01-239

SAMPLE ID 860104

FRACTION OBA TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

DATA FILE            G DATE INJECTED 01/31/86  
CONC. FACTOR           

ANALYST            RP            VERIFIED BY MCL  
INSTRUMENT            g COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	Trichloroethene	ND
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
1	Trichlorofluoromethane	0.64	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
—	trans-1,2-Dichloroethene	ND	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND			
—	Bromodichloromethane	ND			
—	1,2-Dichloropropane	ND			
—	trans-1,3-Dichloropropene	ND			

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-239

Continued From Above

SAMPLE ID 860104

FRACTION OBA TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-01-239

SAMPLE ID 860104

FRACTION 08C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/30/86 Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/03/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv  
Results by Sample

LAB # 86-01-239

SAMPLE ID 860106

FRACTION 09A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

DATA FILE: \_\_\_\_\_ G \_\_\_\_\_ DATE INJECTED 02/03/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ 9 \_\_\_\_\_ COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	20.0
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	3.07**	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-239

Continued From Above

SAMPLE ID 860106

FRACTION 09A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-01-239

Results by Sample

SAMPLE ID 860106

FRACTION 09C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 01/30/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/03/86

ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;			

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602
06B	:	DUP601	06D	:	DUP602
07B	:	DUP601	07D	:	DUP602
08B	:	DUP601	08D	:	DUP602
09B	:	DUP601	09D	:	DUP602

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Analytical Serv  
03/10/86 12:21:44

LAB # 86-01-240

REPORT Radian  
TO Bl. 4  
Austin  
ATTEN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

WORK ID site 1, landfill 1 (metals)  
TAKEN NR  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INV. # 7435

Footnotes and Comments

- \* Indicates a value less than 3 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.
- 2 Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

Q1 860100  
Q2 860102  
Q3 860105  
Q4 860107  
Q5 860101  
Q6 860108  
Q7 860103  
Q8 860104  
Q9 860106

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPE  
AS GA Arsenic, low level  
BA E Barium, ICPE  
CD E Cadmium, ICPE  
CR E Chromium, ICPE  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
HG CA Mercury, Gold Vapor  
PB GA Lead, low level  
SE GA Selenium, low level

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Analytical Serv REPORT  
RESULTS BY TEST

LAB # 86-01-240

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.012	0.013	0.015	0.004*	0.008*
AS_GA ug/ml	<.005	<.005	<.005	<.005	<.005
BA_E ug/ml	0.053	0.059	0.065	0.035	0.052
CD_E ug/ml	<.002	0.003*	<.002	<.002	<.002
CR_E ug/ml	<.005	0.019*	0.013*	<.005	<.005
DG3020 date complete	02/05/86	02/05/86	02/05/86	02/05/86	02/05/86
DG6010 date complete	02/10/86	02/10/86	02/10/86	02/10/86	02/10/86
HG_CA ug/ml	<.0002	<.0002	<.0002	<.0002	0.0003*
PB_GA ug/ml	<.002	<.002	<.002	<.002	<.002
SE_GA ug/ml	<.003	<.003	<.003	<.003	<.003

TEST CODE	Sample 06 (entered units)	Sample 07 (entered units)	Sample 08 (entered units)	Sample 09 (entered units)
AG_E ug/ml	0.011	0.014	0.017	0.013
AS_GA ug/ml	<.005	<.005	<.005	<.005

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Analytical Serv  
RESULTS BY TEST

LAB # 86-01-240

CONTINUED FROM ABOVE

BA E	0.022	0.068	0.099	0.038
ug/ml				
CD E	<.002	<.002	<.002	<.002
ug/ml				
CR E	0.012*	0.010*	0.018*	0.067
ug/ml				
DC3020	02/05/86	02/05/86	02/05/86	02/05/86
date complete				
DC6010	02/10/86	02/10/86	02/10/86	02/10/86
date complete				
HG CA	<.0002	<.0002	0.0003*	<.0002
ug/ml				
PB GA	<.002	<.002	0.016	<.002
ug/ml				
SE GA	<.003	<.003	<.003	<.003
ug/ml				

LAB # 86-01-242

SEPMO1 Redian Corporation  
10 Larry French  
Austin, Texas

٥٣١٦

CLIENT PLANT 4 \_\_\_\_\_ SAMPLES 10 \_\_\_\_\_  
 COMPANY General Dynamics  
 FACILITY GENL. Plant 4, Bldg 4  
 Austin, Texas

THE UNIVERSITY OF CHICAGO

TABLE 1/29-30/86

TRAICS	Ref. Ex	321751334	321751430
--------	---------	-----------	-----------

100-443881-1

# D C 0-267-37

# Individual and separate cover

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SECRET

[illegible]

## Analytical Serv TEST CODES and NAMES used on this report

EX 625	Extraction only - 625 BN/A
ME25 A	Method 625 Acid Compounds
ME25 B	Method 625 Base/Neutrals
ME25 S	GC/MS Characterization-ABN
ME 608	Pesticides & PCBs by GC/MS

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 Analytical Serv REPORT  
 RESULTS BY TEST LAB # 86-01-242

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 825	01/31/85	01/31/86	01/31/86	01/31/86	01/31/86
date complete					
TEST CODE	Sample 06	Sample 07	Sample 08	Sample 09	Sample 10
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 825	01/31/86	01/31/86	01/31/86	01/31/86	01/31/86
date complete				01/31/86	01/31/86
				01/31/86	

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 850106 H2O

FRACTION Q1A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 01/30/86

Category

DATA FILE 85001242001

DATE EXTRACTED 01/31/86

VERIFIED BY LAK

CORE FACTOR 1

DATE INJECTED 02/07/86

ANALYST

INSTRUMENT

COMPOUNDS DETECTED

O

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
114	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
3A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
2A	37A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
42A 241	43-phenol	42
25A 242	44-phenol	48
111A 243	45-phenol	141
244	46-phenol	

NOTES: 240 DETECTIONS FOR THIS REPORT

2424 a scan number of retention time on chromatogram

All results reported in 1041 unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 850106 H2O

FRACTION 01A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank, background subtraction not performed

J = estimated value, less than method detection limit.

CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Analytical Serv  
Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID 860106 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

DATA FILE 2001242001		DATE EXTRACTED 01/31/86		ANALYST		INSTRUMENT		U/L		VERIFIED BY LAK	
CORR FACTOR 1		DATE INJECTED 03/07/86						F2		COMPOUNDS DETECTED 2	
REFS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT		
18	18	18	acenaphthene	ND	41B	61B	61B	N-nitrosodimethylamine	ND		
48	92	92	benzidine	ND	43B	62B	62B	N-nitrosodiphenylamine	ND		
48	82	82	1,2,4-trichlorobenzene	ND	42B	63B	63B	N-nitrosodi-n-propylamine	ND		
326	98	98	hexachlorobenzene	ND	13B	1663	66B	bis(2-ethylhexyl)phthalate	2 3		
348	128	128	hexachloroethane	ND	15B	67B	67B	butyl benzyl phthalate	ND		
118	188	188	bis(2-chloroethyl)ether	ND	26B	1323	68B	di-butyl phthalate	2 4		
158	208	208	2-chloronaphthalene	ND	27B	69B	69B	di-n-octyl phthalate	ND		
208	258	258	1,2-dichlorobenzene	ND	24B	70B	70B	diethyl phthalate	ND		
218	268	268	1,3-dichlorobenzene	ND	25B	71B	71B	dimethyl phthalate	ND		
218	278	278	1,4-dichlorobenzene	ND	5B	72B	72B	benzo(a)anthracene A	ND		
228	288	288	2,3-dichlorobenzidine	ND	6B	73B	73B	benzo(a)pyrene	ND		
278	338	338	4,4'-dinitrostoluene	ND	7B	74B	74B	benzo(b)fluoranthene *	ND		
288	348	348	2,4-dinitrostoluene	ND	9B	75B	75B	benzo(k)fluoranthene *	ND		
278	378	378	1,2,4,6-tetrahydrocarbazole	ND	18B	76B	76B	chrysene A	ND		
218	28	28	fluoranthene	ND	2B	77B	77B	acenaphthylene	ND		
176	428	428	4-chlorophenyl phenyl ether	ND	3B	78B	78B	anthracene B	ND		

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 860105 HED

FRACTION Q1A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

146	413	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
152	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
166	428	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	558	nitrobenzene	ND				

**SUBSTRATE RECOVERIES**

DATA CODE	RESULT
401	45-nitrobenzene 43
402	2-fluorobiphenyl 44
403	4,4'-terphenyl 56
404	1,1'-biphenyl

100% recovery of all substrates was obtained.

The following table shows the recovery of the substrates specified in the test method of the test method limit method 625, (Federal Register, 10/26/81) for benzo(a)fluoranthene and benzo(k)fluoranthene co-elute. A benzo(a)fluoranthene and benzo(k)fluoranthene co-elute, high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850106 H2O

FRACTION 01A

TEST CUDE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

δ = anthracene and phenanthrene correlate in high concentrations  
 PL = detected in reagent blank, background subtraction not performed  
 J = estimated value, less than method detection limit  
 CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection  
 limits should be multiplied by conc factor.

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Analytical Serv REPORT  
Results by Sample

LAB # 86-01-242

SAMPLE ID 860106 HED

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 01/30/86

Category

CHRD # 8601242001  
SAMPLE SIZE 1

DATE ANALYZED 02/11/86

UNITS ug/l

VERIFIED BY LAK

CONF LEVEL REF CMPD

COMPOUND

SCAN

RESULT

No PCBs detected

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID 950106 H20

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

DATA FILE 9501242C01

DATE EXTRACTED 01/31/86

ANALYST WJL

VERIFIED BY LAW

CONC FACTOR

DATE INJECTED 02/07/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	85P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
2P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	gamma hexachlorocyclopentadiene	ND	24P	112P	PCB-1016	ND
16P	100P	hexachlorocyclopentadiene	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 860106 HED

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

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Results by Sample

LAB # 86-01-242

SAMPLE ID 860100 H20

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

DATA FILE 86001242C02  
CONC FACTOR 1

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

ANALYST  
INSTRUMENT

WJL  
F2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAM	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	481 65A	phenol	2
5A	57A	2-nitrophenol	ND				

**SURROGATE RECOVERIES**

SCAM CODE	COMPOUND	RESULT
2403 491	45-phenol	129
2411 492	2-fluorophenol	249
2423 493	2,4-dichlorophenol	130
434	43-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAM = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 860100 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.



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Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID 860100 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

DATA FILE	200D1242002	DATE EXTRACTED	01/31/86	ANALYST	WJL	VERIFIED BY	LAK
CONC. FACTOR	1	DATE INJECTED	02/07/86	INSTRUMENT	F2	COMPOUNDS DETECTED	2
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
10	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
40	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
460	6B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
230	9B	hexachlorobenzene	ND	13B	1660	bis(2-ethylhexyl)phthalate	5
360	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
110	19B	bis(2-chloroethyl)ether	ND	26B	1221	di-butyl phthalate	4
140	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
200	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
210	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
240	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
250	28B	2,3-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
270	29B	1,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene	ND
280	30B	1,5-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene	ND
310	31B	1,6-dinitrotoluene	ND	10B	76B	chrysene A	ND
320	32B	fluoranthene	ND	2B	77B	acenaphthylene	ND
170	40B	4-chlorophenyl alcohol ether	ND	3B	78B	anthracene B	ND

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ANALYTICAL DATA  
Results by Sample

LAB # 86-01-242  
Continued From Above

SAMPLE ID 860100 H2O

FRACTION 02A  
Date & Time Collected 01/29/86

TEST CODE M625 B NAME Method 625 Base/Neutrals  
Category

140	412	4-bromophenyl phenyl ether	ND	68	79B	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	508	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
401	558	nitrobenzene	ND				

SUBSTRATE RECOVERIES

SCEN CODE	RECOVER	
100A	151	45-nitrobenzene 194
100B	112	2-fluorobiphenyl 148
100C	103	4,4'-terphenyl 278
100D	104	1,10-diphenyl

NOTES: 1. Sample ID 860100 H2O, 10/26/84

2. 100A, 100B, 100C, 100D, 100E, 100F, 100G, 100H, 100I, 100J, 100K, 100L, 100M, 100N, 100O, 100P, 100Q, 100R, 100S, 100T, 100U, 100V, 100W, 100X, 100Y, 100Z, 100AA, 100AB, 100AC, 100AD, 100AE, 100AF, 100AG, 100AH, 100AI, 100AJ, 100AK, 100AL, 100AM, 100AN, 100AO, 100AP, 100AQ, 100AR, 100AS, 100AT, 100AU, 100AV, 100AW, 100AX, 100AY, 100AZ, 100BA, 100BB, 100BC, 100BD, 100BE, 100BF, 100BG, 100BH, 100BI, 100BJ, 100BK, 100BL, 100BM, 100BN, 100BO, 100BP, 100BQ, 100BR, 100BS, 100BT, 100BU, 100BV, 100BW, 100BX, 100BY, 100BZ, 100CA, 100CB, 100CC, 100CD, 100CE, 100CF, 100CG, 100CH, 100CI, 100CJ, 100CK, 100CL, 100CM, 100CN, 100CO, 100CP, 100CQ, 100CR, 100CS, 100CT, 100CU, 100CV, 100CW, 100CX, 100CY, 100CZ, 100DA, 100DB, 100DC, 100DD, 100DE, 100DF, 100DG, 100DH, 100DI, 100DJ, 100DK, 100DL, 100DM, 100DN, 100DO, 100DP, 100DQ, 100DR, 100DS, 100DT, 100DU, 100DV, 100DW, 100DX, 100DY, 100DZ, 100EA, 100EB, 100EC, 100ED, 100EE, 100EF, 100EG, 100EH, 100EI, 100EJ, 100EK, 100EL, 100EM, 100EN, 100EO, 100EP, 100EQ, 100ER, 100ES, 100ET, 100EU, 100EV, 100EW, 100EX, 100EY, 100EZ, 100FA, 100FB, 100FC, 100FD, 100FE, 100FF, 100FG, 100FH, 100FI, 100FJ, 100FK, 100FL, 100FM, 100FN, 100FO, 100FP, 100FQ, 100FR, 100FS, 100FT, 100FU, 100FV, 100FW, 100FX, 100FY, 100FZ, 100GA, 100GB, 100GC, 100GD, 100GE, 100GF, 100GG, 100GH, 100GI, 100GJ, 100GK, 100GL, 100GM, 100GN, 100GO, 100GP, 100GQ, 100GR, 100GS, 100GT, 100GU, 100GV, 100GW, 100GX, 100GY, 100GZ, 100HA, 100HB, 100HC, 100HD, 100HE, 100HF, 100HG, 100HH, 100HI, 100HJ, 100HK, 100HL, 100HM, 100HN, 100HO, 100HP, 100HQ, 100HR, 100HS, 100HT, 100HU, 100HV, 100HW, 100HX, 100HY, 100HZ, 100IA, 100IB, 100IC, 100ID, 100IE, 100IF, 100IG, 100IH, 100II, 100IJ, 100IK, 100IL, 100IM, 100IN, 100IO, 100IP, 100IQ, 100IR, 100IS, 100IT, 100IU, 100IV, 100IW, 100IX, 100IY, 100IZ, 100JA, 100JB, 100JC, 100JD, 100JE, 100JF, 100JG, 100JH, 100JI, 100JJ, 100JK, 100JL, 100JM, 100JN, 100JO, 100JP, 100JQ, 100JR, 100JS, 100JT, 100JU, 100JV, 100JW, 100JX, 100JY, 100JZ, 100KA, 100KB, 100KC, 100KD, 100KE, 100KF, 100KG, 100KH, 100KI, 100KJ, 100KK, 100KL, 100KM, 100KN, 100KO, 100KP, 100KQ, 100KR, 100KS, 100KT, 100KU, 100KV, 100KW, 100KX, 100KY, 100KZ, 100LA, 100LB, 100LC, 100LD, 100LE, 100LF, 100LG, 100LH, 100LI, 100LJ, 100LK, 100LL, 100LM, 100LN, 100LO, 100LP, 100LQ, 100LR, 100LS, 100LT, 100LU, 100LV, 100LW, 100LX, 100LY, 100LZ, 100MA, 100MB, 100MC, 100MD, 100ME, 100MF, 100MG, 100MH, 100MI, 100MJ, 100MK, 100ML, 100MM, 100MN, 100MO, 100MP, 100MQ, 100MR, 100MS, 100MT, 100MU, 100MV, 100MW, 100MX, 100MY, 100MZ, 100NA, 100NB, 100NC, 100ND, 100NE, 100NF, 100NG, 100NH, 100NI, 100NJ, 100NK, 100NL, 100NM, 100NO, 100NP, 100NQ, 100NR, 100NS, 100NT, 100NU, 100NV, 100NW, 100NX, 100NY, 100NZ, 100OA, 100OB, 100OC, 100OD, 100OE, 100OF, 100OG, 100OH, 100OI, 100OJ, 100OK, 100OL, 100OM, 100ON, 100OO, 100OP, 100OQ, 100OR, 100OS, 100OT, 100OU, 100OV, 100OW, 100OX, 100OY, 100OZ, 100PA, 100PB, 100PC, 100PD, 100PE, 100PF, 100PG, 100PH, 100PI, 100PJ, 100PK, 100PL, 100PM, 100PN, 100PO, 100PP, 100PQ, 100PR, 100PS, 100PT, 100PU, 100PV, 100PW, 100PX, 100PY, 100PZ, 100QA, 100QB, 100QC, 100QD, 100QE, 100QF, 100QG, 100QH, 100QI, 100QJ, 100QK, 100QL, 100QM, 100QN, 100QO, 100QP, 100QQ, 100QR, 100QS, 100QT, 100QU, 100QV, 100QW, 100QX, 100QY, 100QZ, 100RA, 100RB, 100RC, 100RD, 100RE, 100RF, 100RG, 100RH, 100RI, 100RJ, 100RK, 100RL, 100RM, 100RN, 100RO, 100RP, 100RQ, 100RR, 100RS, 100RT, 100RU, 100RV, 100RW, 100RX, 100RY, 100RZ, 100SA, 100SB, 100SC, 100SD, 100SE, 100SF, 100SG, 100SH, 100SI, 100SJ, 100SK, 100SL, 100SM, 100SN, 100SO, 100SP, 100SQ, 100SR, 100SS, 100ST, 100SU, 100SV, 100SW, 100SX, 100SY, 100SZ, 100TA, 100TB, 100TC, 100TD, 100TE, 100TF, 100TG, 100TH, 100TI, 100TJ, 100TK, 100TL, 100TM, 100TN, 100TO, 100TP, 100TQ, 100TR, 100TS, 100TT, 100TU, 100TV, 100TW, 100TX, 100TY, 100TZ, 100UA, 100UB, 100UC, 100UD, 100UE, 100UF, 100UG, 100UH, 100UI, 100UJ, 100UK, 100UL, 100UM, 100UN, 100UO, 100UP, 100UQ, 100UR, 100US, 100UT, 100UU, 100UV, 100UW, 100UX, 100UY, 100UZ, 100VA, 100VB, 100VC, 100VD, 100VE, 100VF, 100VG, 100VH, 100VI, 100VJ, 100VK, 100VL, 100VM, 100VN, 100VO, 100VP, 100VQ, 100VR, 100VS, 100VT, 100VU, 100VV, 100VW, 100VX, 100VY, 100VZ, 100WA, 100WB, 100WC, 100WD, 100WE, 100WF, 100WG, 100WH, 100WI, 100WJ, 100WK, 100WL, 100WM, 100WN, 100WO, 100WP, 100WQ, 100WR, 100WS, 100WT, 100WU, 100WV, 100WW, 100WX, 100WY, 100WZ, 100XA, 100XB, 100XC, 100XD, 100XE, 100XF, 100XG, 100XH, 100XI, 100XJ, 100XK, 100XL, 100XM, 100XN, 100XO, 100XP, 100XQ, 100XR, 100XS, 100XT, 100XU, 100XV, 100XW, 100XX, 100XY, 100XZ, 100YA, 100YB, 100YC, 100YD, 100YE, 100YF, 100YG, 100YH, 100YI, 100YJ, 100YK, 100YL, 100YM, 100YN, 100YO, 100YP, 100YQ, 100YR, 100YS, 100YT, 100YU, 100YV, 100YW, 100YX, 100YY, 100YZ, 100ZA, 100ZB, 100ZC, 100ZD, 100ZE, 100ZF, 100ZG, 100ZH, 100ZI, 100ZJ, 100ZK, 100ZL, 100ZM, 100ZN, 100ZO, 100ZP, 100ZQ, 100ZR, 100ZS, 100ZT, 100ZU, 100ZV, 100ZW, 100ZX, 100ZY, 100ZZ

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Analytical Data

REFUR

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 530100 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

3 - anthracene and phenanthrene co-elute in high concentrations.

FL - detected in reagent blank; background subtraction not performed

U = estimated value, less than method detection limit.

CEC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

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SAMPLE ID S50100 H40

Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 01/29/86 Category

CHPO # 0001242302  
SAMPLE SIZE 1

DATE ANALYZED 02/07/86 UNITS ug/l VERIFIED BY LAK

SCAN

CONFOUND

RESULT

CONF LEVEL REF CMPD

140 PCBs Detected

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Analytical Serv  
Results by Sample

LAB # 86-01-242

SAMPLE ID 860100 HED

FRACTION 02A TEST CUDE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 01/29/86 Category

DATA FILE 860100HED02  
CORE FACTOR 1

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

REFS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1P	89P		aldrin	ND	2P		102P	alpha BHC	ND
10P	90P		dieldrin	ND	3P		103P	beta BHC	ND
2P	91P		chlordane	ND	4P		104P	gamma BHC	ND
7P	92P		4,4'-DDT	ND	5P		105P	delta BHC	ND
8P	93P		4,4'-DDE	ND	18P		106P	PCB-1242	ND
9P	94P		4,4'-DDD	ND	19P		107P	PCB-1254	ND
11P	95P		alpha endosulfan	ND	20P		108P	PCB-1221	ND
12P	96P		beta endosulfan	ND	21P		109P	PCB-1232	ND
14P	97P		endosulfan sulfate	ND	22P		110P	PCB-1248	ND
14S	98P		endrin	ND	23P		111P	PCB-1260	ND
15P	99P		endrin aldehyde	ND	24P		112P	PCB-1016	ND
16P	100P		4,4'-thior	ND	25P		113P	toxaphene	ND
17P	101P		6,6'-thior epoxide	ND					

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

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SAMPLE ID 850100 H2O

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/29/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-01-242

SAMPLE ID 860102 H20

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

DATA FILE 22001242002  
CONC FACTOR 1

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

ANALYST  
INSTRUMENT

WJL  
F2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	31A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	32A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	34A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
2A	34A	2,4-dimethylphenol	ND	10A	474	phenol	2
2A	37A	2-nitrophenol	ND				

## EXTRACTED RECOVERIES

SCAN CODE	COMPOUND	RESULT
122A 431	15 phenol	123
35 437	2-chlorophenol	122
312A 453	2,4-dichlorophenol	124
354	44 phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850102 H2O

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value, less than method detection limit.

COND. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID 850102 HED

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

DATA FILE 850102HED03		DATE EXTRACTED 01/31/86		ANALYST		WJL		VERIFIED BY LAK	
CONC FACTOR 1		DATE INJECTED 02/07/86		INSTRUMENT		F2		COMPOUNDS DETECTED 1	
NOES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1B	1B	1B	acenaphthene	ND	41B	61B	61B	N-nitrosodimethylamine	ND
4B	5B	5B	benzidine	ND	43B	62B	62B	N-nitrosodiphenylamine	ND
45B	6B	6B	1,2,4-trichlorobenzene	ND	42B	63B	63B	N-nitrosodi-n-propylamine	ND
35B	9B	9B	hexachlorobenzene	ND	13B	66B	66B	bis(2-ethylhexyl)phthalate	ND
36B	13B	13B	hexachloroethane	ND	15B	67B	67B	butyl benzyl phthalate	ND
11B	18B	18B	bis(2-chloroethyl)ether	ND	26B	68B	68B	di-butyl phthalate	3 2
15B	20B	20B	2-chloronaphthalene	ND	29B	69B	69B	di-n-octyl phthalate	ND
20B	25B	25B	1,2-dichlorobenzene	ND	24B	70B	70B	diethyl phthalate	ND
21B	28B	28B	1,3-dichlorobenzene	ND	25B	71B	71B	dimethyl phthalate	ND
23B	31B	31B	1,4 dichlorobenzene	ND	5B	72B	72B	benzo(a)anthracene	ND
25B	34B	34B	3,3-dichlorobenzidine	ND	6B	73B	73B	benzo(a)pyrene	ND
27B	37B	37B	2,4-dinitrotoluene	ND	7B	74B	74B	benzo(b)fluoranthene	ND
29B	40B	40B	2,5-dinitrotoluene	ND	9B	75B	75B	benzo(k)fluoranthene	ND
31B	43B	43B	1,3-diphenylhydrazine	ND	18B	76B	76B	chrysene	ND
33B	46B	46B	fluoranthene	ND	2B	77B	77B	acenaphthylene	ND
35B	49B	49B	4-chlorophenyl phenyl ether	ND	3B	78B	78B	anthracene	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 950102 H2O

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

14B	412	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	428	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
25B	508	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SUBSTITUTE RECOVERIES

SCAN CODE	RESULT
522 881	d5-nitrobenzene 176
531 882	2-fluorobiphenyl 149
1420 153	d14-terphenyl 275
254	d10-biphenyl

ADDITIONAL DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in this report unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 f = benzo(f)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID B50102 H20

FRACTION Q3A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/29/86

Category

S = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CCRC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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SAMPLE ID 850102 H2O

Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

FRACTION 03A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 01/29/86 Category

CH-0 # 25001242C03  
SAMPLE SIZE 1

DATE ANALYZED 02/07/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No. P.D.s Detected

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RECEIVED: 01/31/85

Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 850102 H2O

FRACTION 03A

TEST CODE MS 608 NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 01/29/86

Category

DATA FILE 20001242C03

DATE EXTRACTED 01/31/86

ANALYST WJL

VERIFIED BY LAK

CONC FACTOR 1

DATE INJECTED 02/07/86

COMPOUNDS DETECTED 0

PEAKS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1P	89P		aldrin	ND	2P		102P	alpha BHC	ND
10P	90P		dieldrin	ND	3P		103P	beta BHC	ND
8P	91P		chlordane	ND	4P		104P	gamma BHC	ND
7P	92P		4,4'-DDT	ND	5P		105P	delta BHC	ND
6P	93P		4,4'-DDE	ND	18P		106P	PCB-1242	ND
5P	94P		4,4'-DDD	ND	19P		107P	PCB-1254	ND
11P	95P		alpha endosulfan	ND	20P		108P	PCB-1221	ND
12P	96P		beta endosulfan	ND	21P		109P	PCB-1232	ND
13P	97P		endosulfan sulfate	ND	22P		110P	PCB-1248	ND
14P	98P		aldrin	ND	23P		111P	PCB-1260	ND
15P	99P		gamma-hyde	ND	24P		112P	PCB-1016	ND
16P	100P		gamma-chlor	ND	25P		113P	toxaphene	ND
17P	101P		hepta-chloro-cyclohexene	ND					

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

SAMPLE ID R50102 H20

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/29/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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RECEIVED: 01/31/85

SAMPLE ID 850103 H20

Analytical Serv

Results by Sample

FRACTION 04A

Date & Time Collected 01/30/86

REPORT

TEST CODE M625 A

NAME Method 625 Acid Compounds

Category

LAB # 86-01-242

DATA FILE 25091242C04		DATE EXTRACTED 01/31/86		ANALYST		WJL		VERIFIED BY LAK	
CONC	FACTOR	DATE INJECTED	02/07/86	INSTRUMENT	F2	COMPOUNDS DETECTED	O		
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT		
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND		
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND		
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND		
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND		
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND		
6A	57A	2-nitrophenol	ND						

SUBSTITUTE RECOVERIES

SCAN CODE	COMPOUND	RESULT
451	45-phenol	54
452	2-fluorophenol	82
453	2,4,6-tribromophenol	119
454	43-phenol	

NOTES: FOR DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

At results reported in ug/l unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 280103 H2O

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

U = estimated value, less than method detection limit.

COND. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



## Analytical Serv

## REPORT

LAB # 86-01-242

Results by Sample

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

DATE EXTRACTED 01/31/86

DATE INJECTED 02/07/86

ANALYST INSTRUMENT

WJL F2

VERIFIED BY LAK

COMPOUNDS DETECTED 2

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

FAC 04

NO. OF

EPA

COMPOUND

RESULT

NPDES

SCAN

EPA

COMPOUND

RESULT

12	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
45B	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
32B	98	hexachlorobenzene	ND	13B	1660	bis(2-ethylhexyl)phthalate	2
34B	128	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
116	188	bis(2-chloroethyl)ether	ND	26B	1321	di-butyl phthalate	3
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
208	258	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
218	268	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
228	278	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
238	288	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
278	358	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene #	ND
288	368	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene #	ND
378	378	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
318	398	fluoranthene	ND	2B	77B	acenaphthylene	ND
178	403	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND



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Received 01/31/86

Sample ID 850103 H2O

Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

FRACTION 04A TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

Fluoranthene and phenanthrene co-elute in high concentrations.  
 Not detected in reagent blank, background subtraction not performed.  
 Estimated value, less than method detection limit.  
 Factor indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

LAB # 86-01-242

REPORT

Analytical Serv

Results by Sample

RECEIVED 01/31/85

SAMPLE ID 850103 H20

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

LAB # 8501242504  
DATE SENT 1

DATE ANALYZED 02/07/86

UNITS ug/l

VERIFIED BY LKK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs detected

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 860103 H20

FRACTION 04A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

DATA FILE 20001242C04  
FAC10P

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	87P	aldrin	ND	2P	102P	alpha BHC	ND
1P	90P	dieldrin	ND	3P	103P	beta BHC	ND
1P	91P	chlordane	ND	4P	104P	gamma BHC	ND
1P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
1P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
1P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
1P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
1P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
1P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
1P	98P	endrin	ND	23P	111P	PCB-1260	ND
1P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
1P	100P	heptachlor	ND	25P	113P	toxaphene	ND
1P	101P	heptachlor epoxide	ND				

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Received 01/31/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 250103 H2O

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

FOR INFORMATION FOR THIS REPORT.

0147 - scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

Not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

# Analytical Serv

## REPORT

LAB # 86-01-242

Results by Sample

FRACTION 05A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 01/29/86 Category

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

ANALYST WJL  
INSTRUMENT F2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 0

COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1,2,4,6 trichlorophenol	ND	7A	58A	4-nitrophenol	ND
4-chloro 3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
4-dimethylphenol	ND	10A	65A	phenol	ND
2-nitrophenol	ND				

COMPOUND	RESULT
1,5-phenol	538
2-phenol	942
3-phenol	452
4-phenol	

REPORT  
Time on chromatogram.  
Unless otherwise specified.

Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/29/86

Category

Method 625 is EPA detection limit method 625, (Federal Register, 11/26/84).  
Method 625 is reagent blank. background subtraction not performed.

Reported value less than method detection limit.

Method 625 indicates dilution of sample if greater than one (1). Minimum detection  
factor is 1.0. If greater than one (1), factor.



# Analytical Serv REPORT Results by Sample

LAB # 86-01-242

FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals  
Date & Time Collected 01/29/86 Category

21-03-05		DATE EXTRACTED		01/31/86		ANALYST		WJL		VERIFIED BY LAK	
1		DATE INJECTED		02/07/86		INSTRUMENT		F2		COMPOUNDS DETECTED 2	
NO	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT				
10	acenaphthene	ND	41B		61B	N-nitrosodimethylamine	ND				
11	benzidine	ND	43B		62B	N-nitrosodiphenylamine	ND				
12	2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND				
13	hexachlorobenzene	ND	13B	1661	66B	bis(2-ethylhexyl)phthalate	5				
14	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND				
15	bis(2-chloroethyl)ether	ND	26B	1322	68B	di-butyl phthalate	2.0				
16	2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND				
17	1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND				
18	1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND				
19	1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND				
20	1,3-dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND				
21	1,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND				
22	2,6-dinitrotoluene	ND	9B		75B	benzo(k)fluoranthene *	ND				
23	1,1-diphenylhydrazine	ND	18B		76B	chrysene A	ND				
24	fluoranthene	ND	2B		77B	acenaphthylene	ND				
25	2-chlorophenyl phenyl ether	ND	3B		78B	anthracene B	ND				

ANALYTICAL SERV REPORT  
 Results by Sample  
 LAB # 86-01-242  
 Continued From Above  
 FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals  
 Date & Time Collected 01/29/86 Category

143	413	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
144	429	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
145	433	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
146	508	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
147	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
148	548	isophorone	ND	45B	84B	pyrene	ND
149	558	naphthalene	ND				
150	568	nitrobenzene	ND				

## RECOVERIES

RECOVERIES	RESULT
45-nitrobenzene	206
2-fluorobiphenyl	158
414-terphenyl	312
410-biphenyl	

## REMARKS

The results of the analysis are reported in the table above unless otherwise specified.  
 The results of the analysis are reported in the table above unless otherwise specified.  
 The results of the analysis are reported in the table above unless otherwise specified.  
 The results of the analysis are reported in the table above unless otherwise specified.

LAB # 86-01-242  
Continued From Above

Analytical Serv REPORT  
Results by Sample

FRACTION 05A TEST CODE M625 B NAME Method 625 Base/Neutrals  
Date & Time Collected 01/29/86 Category

fluorene and phenanthrene co-elute in high concentrations.  
detected in reagent blank; background subtraction not performed.  
estimated value, less than method detection limit.  
FACIES indicates dilution of sample if greater than one (1). Minimum detection  
factor should be multiplied by conc. factor.

DATE

01/31/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

850101 H2O

FRACTION 05A

TEST CODE MSNS 5

NAME GCMS Characterization-ABN

Date & Time Collected 01/29/86

Category

LAB # 8501242005

DATE 01/31/85

DATE ANALYZED 02/07/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCBs Detected

Analytical Serv  
Results by Sample

LAB # 86-01-242

Sample # 10001 H-0

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 01/29/86 Category

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

ANALYST WJL  
VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NO	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1	102P	aldrin	ND	2P	102P		alpha BHC	ND
2	103P	dieldrin	ND	3P	103P		beta BHC	ND
3	104P	chlordane	ND	4P	104P		gamma BHC	ND
4	105P	4,4'-DDT	ND	5P	105P		delta BHC	ND
5	106P	4,4'-DDE	ND	18P	106P		PCB-1242	ND
6	107P	4,4'-DDD	ND	19P	107P		PCB-1254	ND
7	108P	alpha endosulfan	ND	20P	108P		PCB-1221	ND
8	109P	beta endosulfan	ND	21P	109P		PCB-1232	ND
9	110P	endosulfan sulfate	ND	22P	110P		PCB-1248	ND
10	111P	endrin	ND	23P	111P		PCB-1260	ND
11	112P	endrin aldehyde	ND	24P	112P		PCB-1016	ND
12	113P	heptachlor	ND	25P	113P		toxaphene	ND
13	114P	heptachlor epoxide	ND					

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

Continued From Above

SAMPLE ID 660101 H2O

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/29/85

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

NO-A190 442

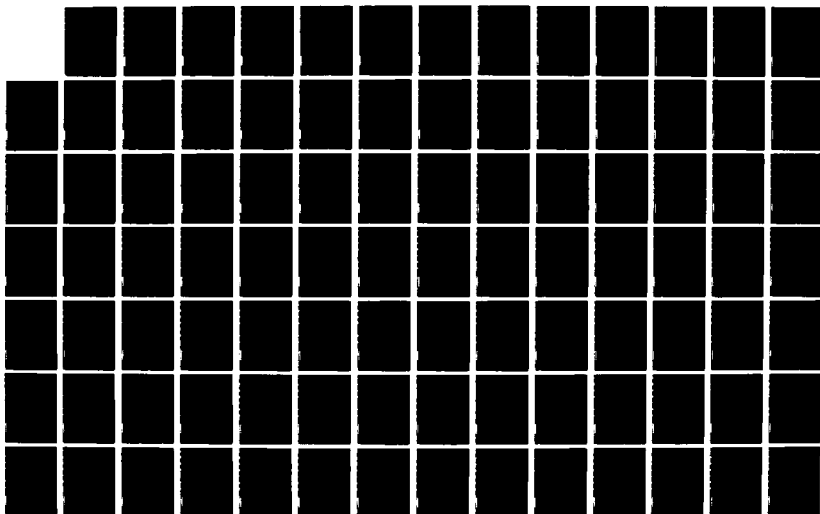
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4801

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UNCLASSIFIED

F/G 24/7

NL



10  
11  
125 14 16  
22  
20  
18



LAB # 86-1-242

REPORT

Analytical Serv

Results by Sample

FRACTION 06A 1ES-002a Method 816-1010 Method 816-1010  
Date & Time Collected: 30/55 Category

ANALYST  
INSTRUMENT  
COMPOUND DETECTED

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/07/86

COMPOUND	NPDES SCAL	EPA	RESULT	COMPOUND	RESULT
2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
2,4-dimethylphenol	ND	10A	65A	phenol	ND
4-nitrophenol	ND				

PERCENTAGE RECOVERIES

COMPOUND	RESULT
4-chlorophenol	100
2,4-dinitrophenol	100
2,4,6-trichlorophenol	100
4-nitrophenol	100

NOTE: 2,4,6-TRICHLOROPHENOL FOR IDENTIFICATION  
Scan number of retention time on chromatogram  
All results reported in mg/L unless otherwise specified

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Analytical Serv

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850107 H2O

FRACTION 06A

TEST CODE N625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
 SL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

SAMPLE ID 860107 H20

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

DATA FILE 8601242C06

DATE EXTRACTED 01/31/86

ANALYST

VERIFIED BY LAW

INSTR FACTOR 1

DATE INJECTED 02/07/86

INSTRUMENT

WJL

COMPOUNDS DETECTED 2

INDEX	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
13	18		acenaphthene	ND	41B	61B		N-nitrosodimethylamine	ND
43	58		benzidine	ND	43B	62B		N-nitrosodiphenylamine	ND
468	88		1,2,4-trichlorobenzene	ND	42B	63B		N-nitrosodi-n-propylamine	ND
208	98		hexachlorobenzene	ND	135	1664	66B	bis(2-ethylhexyl)phthalate	2
368	128		hexachloroethane	ND	15B	67B		butyl benzyl phthalate	ND
11B	188		bis(2-chloroethyl)ether	ND	26B	1325	68B	di-butyl phthalate	2
168	208		2-chloronaphthalene	ND	29B	69B		di-n-octyl phthalate	ND
208	258		1,2-dichlorobenzene	ND	24B	70B		diethyl phthalate	ND
212	268		1,3-dichlorobenzene	ND	25B	71B		dimethyl phthalate	ND
268	278		1,4-dichlorobenzene	ND	5B	72B		benzo(a)anthracene A	ND
288	288		3,3-dichlorobenzidine	ND	6B	73B		benzo(a)pyrene	ND
332	358		1,1-dichloro-2-methyl-2-propyl-1,3-bis(4-chlorophenyl)butane	ND	72	74B		benzo(b)fluoranthene *	ND
368	368		2,2-dichloro-1,1-dimethyl-2-propyl-1,3-bis(4-chlorophenyl)butane	ND	9B	75B		benzo(k)fluoranthene *	ND
248	408		1,1-dichloro-2-methyl-2-propyl-1,3-bis(4-chlorophenyl)butane	ND	18B	76B		chrysene A	ND
212	418		fluoranthene	ND	28	77B		acenaphthylene	ND
178	428		4-chlorobenzyl phenyl ether	ND	38	78B		anthracene B	ND

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Analytical Serv  
Results by Sample

REPORT

LAB # 86-01-242  
Continued From Above

SAMPLE ID 850107 H2O

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

148	415	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
126	423	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	432	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
346	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
382	54B	isophorone	ND	45B	84B	pyrene	ND
396	55B	naphthalene	ND				
405	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SURROGATE	CODE	RESULT
417	571	d5-nitrobenzene 220
424	574	2-fluorobiphenyl 173
433	575	d14-terphenyl 155
441	576	d10 biphenyl

## CONCISE SUMMARY OF THIS REPORT

Summary of results of retention time on chromatogram  
All results reported in this report unless otherwise specified  
were obtained at EPA detection limit method 625 (Federal Register 10/25/84)  
The results for fluoranthene and benzo(a)fluoranthene are low  
The results for anthracene and chrysene are low (high concentrations)

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Analytical Serv

Results by Sample

REPORT

LAD # 66-01-242  
Continued from Above

SAMPLE ID 850107 H2O

FRACTION Q6A

TEST CODE M500-2

WHILE Method 625 Base/Neutrals

Date & Time Collected 11 JUL 86

Category

3 = anthracene and phenanthrene co-elute in high molecular fraction  
St = detected in reagent blank, background subtraction not performed  
J = estimated value, less than method detection limit  
CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor

ANALYST:                      LAB # 86-01-242  
 ANALYTICAL SET:                      REF:                       
 SAMPLE ID: 860107 H2O DATE & TIME COLLECTED: 01-01-86  
 FRACTION: 16A TEST CODE: MSMS 5 NAME: COND Characterization-ADR  
 Category:                     

DATE ANALYZED: 02/07/86 CONF:                      REF:                       
 COMPOUND:                      LEVEL:                      MPD:                       
 No PCBs Detected:

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RECEIVED 01/31/85

Analytical Serv

Results by Sample

RECEIVED

LAP # 30-01-242

SAMPLE ID 850107 H20

FRACTION 06A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/85

Category

DATA FILE 20001242C06  
CONC FACTOR

DATE EXTRACTED 01/21/86  
DATE INJECTED 02/11/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

MS/MS SCAN	EPA	COMPOUND	RESULT	REFS	SCAN	EPA	COMPOUND	RESULT
100	85P	aldrin	ND	2P	102P		alpha BHC	ND
100	90P	dieldrin	ND	3P	103P		beta BHC	ND
100	91P	chlordane	ND	4P	104P		gamma BHC	ND
100	92P	4,4'-DDT	ND	5P	105P		delta BHC	ND
100	93P	4,4'-DDE	ND	18P	106P		PCB-1242	ND
100	94P	4,4'-DDD	ND	19P	107P		PCB-1254	ND
100	95P	alpha endosulfan	ND	20P	108P		PCB-1221	ND
100	95P	beta endosulfan	ND	21P	109P		PCB-1233	ND
100	100P	endosulfan sulfate	ND	22P	110P		PCB-1248	ND
100	100P	endrin	ND	23P	111P		PCB-1260	ND
100	100P	endrin aldehyde	ND	24P	112P		PCB-1016	ND
100	100P	heptachlor	ND	25P	113P		toxaphene	ND
100	100P	heptachlor epoxide	ND					

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 860107 H2O

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID B50108 H2U

FRACTION 07A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 01/30/86

Category

DATA FILE 92UD1242C07

DATE EXTRACTED 01/31/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/11/86

WJL

ANALYST INSTRUMENT

5100

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	32A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
121 AS1	d5-phenol	12
122 AS2	2-fluorophenol	45
123 AS3	2,4,6-tribromophenol	43
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN # scan number or retention time in chromatogram

All results reported in ug/l unless otherwise specified

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Analytical DIV

REFUR I

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850108 H20

FRACTION 07A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date &amp; Time Collected 01/30/86

Category

H20 = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
BL = detected in reagent blank, background subtraction not performed  
J = estimated value, less than method detection limit  
CONC. FACTOR indicates dilution of sample if greater than one (1) Minimum detection  
limits should be multiplied by conc. factor.

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Environmental Serv

REPORT

Results by Sample

LAB # 86-01-242

SAMPLE ID 86-01-242

FRACTION 07A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

DATE RECEIVED 01/31/85  
DATE ANALYZED 01/31/86  
DATE REPORTED 01/31/86

ANALYST  
INSTRUMENT  
SITES

PREPARED BY CAP  
COMPOUNDS IDENTIFIED

NAME	NO.	CONC	RESULT	NPDES	SCAL	EPA	COMPOUND	RESULT
10	10	ND	ND	41B	41B	41B	N-nitrosodimethylamine	ND
40	40	ND	ND	42B	42B	42B	N-nitrosodiphenylamine	ND
44	44	ND	ND	42B	42B	42B	N-nitrosodimethylpropylamine	ND
46	46	ND	ND	10B	10B	10B	bis(2-ethylhexyl)phthalate	ND
48	48	ND	ND	15B	15B	15B	butyl benzyl phthalate	ND
116	116	ND	ND	26B	26B	26B	di-butyl phthalate	ND
118	118	ND	ND	28B	28B	28B	di-n-octyl phthalate	ND
120	120	ND	ND	29B	29B	29B	di-n-octyl phthalate	ND
124	124	ND	ND	24B	24B	24B	diethyl phthalate	ND
210	210	ND	ND	51	51	51	di-n-octyl phthalate	ND
212	212	ND	ND	51	51	51	di-n-octyl phthalate	ND
214	214	ND	ND	51	51	51	di-n-octyl phthalate	ND
216	216	ND	ND	51	51	51	di-n-octyl phthalate	ND
218	218	ND	ND	51	51	51	di-n-octyl phthalate	ND
220	220	ND	ND	51	51	51	di-n-octyl phthalate	ND
222	222	ND	ND	51	51	51	di-n-octyl phthalate	ND
224	224	ND	ND	51	51	51	di-n-octyl phthalate	ND
226	226	ND	ND	51	51	51	di-n-octyl phthalate	ND
228	228	ND	ND	51	51	51	di-n-octyl phthalate	ND
230	230	ND	ND	51	51	51	di-n-octyl phthalate	ND
232	232	ND	ND	51	51	51	di-n-octyl phthalate	ND
234	234	ND	ND	51	51	51	di-n-octyl phthalate	ND
236	236	ND	ND	51	51	51	di-n-octyl phthalate	ND
238	238	ND	ND	51	51	51	di-n-octyl phthalate	ND
240	240	ND	ND	51	51	51	di-n-octyl phthalate	ND
242	242	ND	ND	51	51	51	di-n-octyl phthalate	ND
244	244	ND	ND	51	51	51	di-n-octyl phthalate	ND
246	246	ND	ND	51	51	51	di-n-octyl phthalate	ND
248	248	ND	ND	51	51	51	di-n-octyl phthalate	ND
250	250	ND	ND	51	51	51	di-n-octyl phthalate	ND
252	252	ND	ND	51	51	51	di-n-octyl phthalate	ND
254	254	ND	ND	51	51	51	di-n-octyl phthalate	ND
256	256	ND	ND	51	51	51	di-n-octyl phthalate	ND
258	258	ND	ND	51	51	51	di-n-octyl phthalate	ND
260	260	ND	ND	51	51	51	di-n-octyl phthalate	ND
262	262	ND	ND	51	51	51	di-n-octyl phthalate	ND
264	264	ND	ND	51	51	51	di-n-octyl phthalate	ND
266	266	ND	ND	51	51	51	di-n-octyl phthalate	ND
268	268	ND	ND	51	51	51	di-n-octyl phthalate	ND
270	270	ND	ND	51	51	51	di-n-octyl phthalate	ND
272	272	ND	ND	51	51	51	di-n-octyl phthalate	ND
274	274	ND	ND	51	51	51	di-n-octyl phthalate	ND
276	276	ND	ND	51	51	51	di-n-octyl phthalate	ND
278	278	ND	ND	51	51	51	di-n-octyl phthalate	ND
280	280	ND	ND	51	51	51	di-n-octyl phthalate	ND
282	282	ND	ND	51	51	51	di-n-octyl phthalate	ND
284	284	ND	ND	51	51	51	di-n-octyl phthalate	ND
286	286	ND	ND	51	51	51	di-n-octyl phthalate	ND
288	288	ND	ND	51	51	51	di-n-octyl phthalate	ND
290	290	ND	ND	51	51	51	di-n-octyl phthalate	ND
292	292	ND	ND	51	51	51	di-n-octyl phthalate	ND
294	294	ND	ND	51	51	51	di-n-octyl phthalate	ND
296	296	ND	ND	51	51	51	di-n-octyl phthalate	ND
298	298	ND	ND	51	51	51	di-n-octyl phthalate	ND
300	300	ND	ND	51	51	51	di-n-octyl phthalate	ND
302	302	ND	ND	51	51	51	di-n-octyl phthalate	ND
304	304	ND	ND	51	51	51	di-n-octyl phthalate	ND
306	306	ND	ND	51	51	51	di-n-octyl phthalate	ND
308	308	ND	ND	51	51	51	di-n-octyl phthalate	ND
310	310	ND	ND	51	51	51	di-n-octyl phthalate	ND
312	312	ND	ND	51	51	51	di-n-octyl phthalate	ND
314	314	ND	ND	51	51	51	di-n-octyl phthalate	ND
316	316	ND	ND	51	51	51	di-n-octyl phthalate	ND
318	318	ND	ND	51	51	51	di-n-octyl phthalate	ND
320	320	ND	ND	51	51	51	di-n-octyl phthalate	ND
322	322	ND	ND	51	51	51	di-n-octyl phthalate	ND
324	324	ND	ND	51	51	51	di-n-octyl phthalate	ND
326	326	ND	ND	51	51	51	di-n-octyl phthalate	ND
328	328	ND	ND	51	51	51	di-n-octyl phthalate	ND
330	330	ND	ND	51	51	51	di-n-octyl phthalate	ND
332	332	ND	ND	51	51	51	di-n-octyl phthalate	ND
334	334	ND	ND	51	51	51	di-n-octyl phthalate	ND
336	336	ND	ND	51	51	51	di-n-octyl phthalate	ND
338	338	ND	ND	51	51	51	di-n-octyl phthalate	ND
340	340	ND	ND	51	51	51	di-n-octyl phthalate	ND
342	342	ND	ND	51	51	51	di-n-octyl phthalate	ND
344	344	ND	ND	51	51	51	di-n-octyl phthalate	ND
346	346	ND	ND	51	51	51	di-n-octyl phthalate	ND
348	348	ND	ND	51	51	51	di-n-octyl phthalate	ND
350	350	ND	ND	51	51	51	di-n-octyl phthalate	ND
352	352	ND	ND	51	51	51	di-n-octyl phthalate	ND
354	354	ND	ND	51	51	51	di-n-octyl phthalate	ND
356	356	ND	ND	51	51	51	di-n-octyl phthalate	ND
358	358	ND	ND	51	51	51	di-n-octyl phthalate	ND
360	360	ND	ND	51	51	51	di-n-octyl phthalate	ND
362	362	ND	ND	51	51	51	di-n-octyl phthalate	ND
364	364	ND	ND	51	51	51	di-n-octyl phthalate	ND
366	366	ND	ND	51	51	51	di-n-octyl phthalate	ND
368	368	ND	ND	51	51	51	di-n-octyl phthalate	ND
370	370	ND	ND	51	51	51	di-n-octyl phthalate	ND
372	372	ND	ND	51	51	51	di-n-octyl phthalate	ND
374	374	ND	ND	51	51	51	di-n-octyl phthalate	ND
376	376	ND	ND	51	51	51	di-n-octyl phthalate	ND
378	378	ND	ND	51	51	51	di-n-octyl phthalate	ND
380	380	ND	ND	51	51	51	di-n-octyl phthalate	ND
382	382	ND	ND	51	51	51	di-n-octyl phthalate	ND
384	384	ND	ND	51	51	51	di-n-octyl phthalate	ND
386	386	ND	ND	51	51	51	di-n-octyl phthalate	ND
388	388	ND	ND	51	51	51	di-n-octyl phthalate	ND
390	390	ND	ND	51	51	51	di-n-octyl phthalate	ND
392	392	ND	ND	51	51	51	di-n-octyl phthalate	ND
394	394	ND	ND	51	51	51	di-n-octyl phthalate	ND
396	396	ND	ND	51	51	51	di-n-octyl phthalate	ND
398	398	ND	ND	51	51	51	di-n-octyl phthalate	ND
400	400	ND	ND	51	51	51	di-n-octyl phthalate	ND

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Time collected in 2010

## Category

entry	monomer	polymer	QD	QD	QD	QD	QD
146	1,4-bis(4-oxocyclohex-2-en-1-yl)ethane		ND	43B	49B	benzo(g,h,i)perylene	ND
147	4,4'-bis(4-oxocyclohex-2-en-1-yl)ether	ND	QD	80B	fluorene	ND	
148	4,4'-bis(4-oxocyclohex-2-en-1-yl)methane	ND	44B	81B	phenanthrene D	ND	
149	4,4'-bis(4-oxocyclohex-2-en-1-yl)propane	ND	19B	82B	dibenzo(a,h)anthracene	ND	
150	4,4'-bis(4-oxocyclohex-2-en-1-yl)pentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND	
151	4,4'-bis(4-oxocyclohex-2-en-1-yl)phosphone	ND	45B	84B	pyrene	ND	

# THE FUTURE OF THE FUTURE

2064	1016	41501	48-nitrobenzene	85
2065	1017	41502	4-fluorobiphenyl	64
2066	1018	41503	4,4'-terphenyl	37
2067	1019	41504	4,4'-biphenyl	

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 950108 HEU

FRACTION 07A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

3 = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank, background subtraction not performed.  
J = estimated value, less than method detection limit.  
CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

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SAMPLE ID 000108 H20

Analytical Serv

Results by Sample

REFUND

FRACTION O/A

TEST CODE MSIN 5

NAME GLMS Characterization-ABU

Date & Time Collected 01/30/86

Category

LAB # 000108 H20  
SAMPLE SIZE 1.0000

DATE ANALYZED 02/11/86  
UNITS ug/L

VERIFIED BY LAB

SCAN

COMPOUND

RESULT

CONC. off  
LEVEL MPD

No. PCBs Detected

DATE RECEIVED 01/31/85

ANALYTICAL SERV  
Results by Sample

LAB # 86-01-242

SAMPLE ID 850108 H2O

FRACTION 07A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 01/30/86 Category

DATA FILE 50001242007      DATE EXTRACTED 01/31/86      ANALYST WJL      VERIFIED BY LAK  
CONC FACTOR      DATE INJECTED 02/11/86      COMPOUNDS DETECTED 0

| REF ID | SEAL | EPA  | COMPOUND           | RESULT | NPDES | SCAN | EPA  | COMPOUND  | RESULT |
|--------|------|------|--------------------|--------|-------|------|------|-----------|--------|
| 1P     |      | 82P  | aldrin             | ND     | 2P    |      | 102P | alpha BHC | ND     |
| 10P    |      | 90P  | dieldrin           | ND     | 3P    |      | 103P | beta BHC  | ND     |
| 2P     |      | 71P  | chlordane          | ND     | 4P    |      | 104P | gamma BHC | ND     |
| 7P     |      | 92P  | 4,4'-DDT           | ND     | 5P    |      | 105P | delta BHC | ND     |
| 8P     |      | 93P  | 4,4'-DDE           | ND     | 18P   |      | 106P | PCB-1242  | ND     |
| 9P     |      | 94P  | 4,4'-DDD           | ND     | 19P   |      | 107P | PCB-1254  | ND     |
| 11P    |      | 95P  | alpha endosulfan   | ND     | 20P   |      | 108P | PCB-1221  | ND     |
| 12P    |      | 96P  | beta endosulfan    | ND     | 21P   |      | 109P | PCB-1232  | ND     |
| 14P    |      | 97P  | endosulfan sulfate | ND     | 22P   |      | 110P | PCB-1248  | ND     |
| 14P    |      | 98P  | endrin             | ND     | 23P   |      | 111P | PCB-1260  | ND     |
| 15P    |      | 99P  | endrin aldehyde    | ND     | 24P   |      | 112P | PCB-1016  | ND     |
| 16P    |      | 100P | heptachlor         | ND     | 25P   |      | 113P | toxaphene | ND     |
| 17P    |      | 101P | heptachlor epoxide | ND     |       |      |      |           |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 860108 H20

FRACTION 07A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 850105 H2O

FRACTION 08A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE SC0901242C08  
CONC FACTOR 1

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/11/86

ANALYST  
INSTRUMENT

WJL  
5100  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 456 65A | phenol                     | 3      |
| 5A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

**SURROGATE RECOVERIES**

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 1201 491  | 49-phenol            | 111    |
| 1211 492  | 2-fluorophenol       | 109    |
| 1021 493  | 2,4,6-tribromophenol | 78     |
| 494       | 43-phenol            |        |

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 860105 H2O

FRACTION 08A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value, less than method detection limit

CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

SAMPLE ID 860105 HED

FRACTION ORA

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

DATA FILE SQ021542008  
COND FACTS

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/11/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| APDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 18         | 16  | acrenaphthene           | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 42         | 58  | benzidine               | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 466        | 68  | 1,2,4-trichlorobenzene  | ND     | 42B        | 63B | N-nitrosodim-n-propylamine | ND     |
| 308        | 98  | hexachlorobenzene       | ND     | 13B 1630   | 66B | bis(2-ethylhexyl)phthalate | 4      |
| 162        | 128 | hexachloroethane        | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 111        | 108 | bis(2-chloroethyl)ether | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 103        | 108 | monochlorophthalene     | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 1          | 16  | 1,1-dichlorobenzene     | ND     | 24E        | 70B | diethyl phthalate          | ND     |
| 1          | 108 | 1,2-dichlorobenzene     | ND     | 25E        | 71B | dimethyl phthalate         | ND     |
| 1          | 10  | 1,4-dichlorobenzene     | ND     | 5F         | 72B | benzo(a)anthracene         | ND     |
| 1          | 108 | 1,5-dichlorobenzene     | ND     | 6B         | 73B | benzo(b)pyrene             | ND     |
| 1          | 108 | 1,6-dichlorobenzene     | ND     | 7B         | 74B | benzo(b)fluoranthene       | ND     |
| 1          | 108 | 1,7-dichlorobenzene     | ND     | 9B         | 75B | benzo(e)fluoranthene       | ND     |
| 1          | 108 | 1,8-dichlorobenzene     | ND     | 10B        | 76B | benzo(g)herysene           | ND     |
| 1          | 108 | 1,9-dichlorobenzene     | ND     | 11B        | 77B | acrenaphthylene            | ND     |
| 1          | 108 | 1,10-dichlorobenzene    | ND     | 12B        | 78B | anthracene                 | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 860105 H2O

FRACTION 08A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 148 | 418 | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 128 | 428 | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 108 | 438 | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 348 | 528 | hexachlorobutadiene         | ND | 19E | 82B | dibenzo(a,h)anthracene | ND |
| 358 | 538 | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 388 | 548 | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 398 | 558 | naphthalene                 | ND |     |     |                        |    |
| 408 | 568 | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 528 581   | d5 nitrobenzene 125 |
| 551 582   | 2-fluorobiphenyl 66 |
| 1417 553  | d14-terphenyl 38    |
| 551       | d10-biphenyl        |

NOTES AND OBSERVATIONS FOR THIS REPORT

DATA is shown in order of retention time on chromatogram  
 All results reported in this report unless otherwise specified  
 ND = not detected at EPA detection limit method 625. (General Register, 10/22/84)  
 + = benzo(a)fluoranthene and benzo(k)fluoranthene co-elute  
 \* = benzo(a)anthracene and chrysene co-elute high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850105 H2O

FRACTION 08A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

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SAMPLE ID 850105 H2O

Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

FRACTION O8A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 01/30/86 Category

CHRD # 5001242008

SAMPLE SIZE 1

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/11/86

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCBs Detected

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

SAMPLE ID E60105 H2O

FRACTION OBA

TEST CODE MS 608

NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 01/30/86

Category

DATA FILE 50001242C08

DATE EXTRACTED 01/31/85

ANALYST NJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

GNC FACTOR

DATE INJECTED 02/11/86

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 85P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 5P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 94P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 95P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1202  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 860105 H2O

FRACTION 08A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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RECEIVED: 01/31/85

Analytical Serv

REF091

Results by Sample

LAB # 86-01-242

SAMPLE ID dup anal 625

FRACTION 09B

TEST CODE 8625 A NAME Method 625 Acid Compounds

Date : time Collected not specified

Category

DATA FILE 8001242002  
CORC FACTOR 1

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/11/86

ANALYST  
INSTRUMENT

WJL  
0100  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 114        | 314 | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 2A         | 324 | 4-chloro-2-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 344 | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 314 | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 344 | 2,4-dimethylphenol      | ND     | 10A        | 456 | 65A                        | phenol |
| 5A         | 374 | 2-nitrophenol           | ND     |            |     |                            |        |

SUBSTRATE RECOVERIES

| SCAN CODE | COMPOUND | RESULT |
|-----------|----------|--------|
| 454 411   | phenol   | 146    |
| 454 412   | phenol   | 147    |
| 1020 412  | phenol   | 148    |
| 414       | phenol   |        |

OTHER ALSO IDENTIFIED FOR INFO

SCAN = scan number of peak, time on chromatogram

All results reported in %, unless otherwise specified

DATE 08

RECEIVED 01/11/00

ANALYTICAL SERV

REPORT

Results by Sample

LAB # 86-01-140

Continued From Above

SAMPLE 10 dup anal 625

FRACTION 09B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

NO = not detected at EPA detection limit method 625. (Federal Register, 11/26/84)

BL = detected in reagent blank, background subtraction not performed

U = estimated value, less than method detection limit

QFAC = FACTOR indicates dilution of sample if greater than one (1) Minimum detection

limits should be multiplied by conc factor

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RECEIVED 01/31/85

Analytical Serv  
Results by Sample

LAB # 86-01-242

SAMPLE ID 809 anal 625

FRACTION 09B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

| DATA FILE 8601242C02   |     | DATE EXTRACTED 01/31/86  |        | ANALYST    |     | WJL                        |        | VERIFIED BY LAK    |     |
|------------------------|-----|--------------------------|--------|------------|-----|----------------------------|--------|--------------------|-----|
| DATE INJECTED 02/11/86 |     | DATE INJECTED 02/11/86   |        | INSTRUMENT |     | 5100                       |        | COMPOUNDS DETECTED |     |
| NPDES SCAN             | EPA | COMPOUND                 | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT | NPDES SCAN         | EPA |
| 10                     | 1B  | acenaphthene             | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |                    |     |
| 42                     | 5B  | benzidine                | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |                    |     |
| 44B                    | 6B  | 1,2,4-trichlorobenzene   | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |                    |     |
| 100                    | 9B  | hexachlorobenzene        | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |                    |     |
| 100                    | 12B | hexachloroethane         | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |                    |     |
| 100                    | 18B | bis(2-chloroethyl)ether  | ND     | 26B        | 68B | di-butyl phthalate         | ND     |                    |     |
| 100                    | 20B | 2-chloronaphthalene      | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |                    |     |
| 100                    | 22B | 1,2-dichlorobenzene      | ND     | 24B        | 70B | diethyl phthalate          | ND     |                    |     |
| 100                    | 24B | 1,3-dichlorobenzene      | ND     | 25B        | 71B | dimethyl phthalate         | ND     |                    |     |
| 100                    | 26B | 1,4-dichlorobenzene      | ND     | 5B         | 72B | benzo(a)anthracene         | A      |                    |     |
| 100                    | 28B | 3,4-dichlorobenzidine    | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |                    |     |
| 100                    | 30B | 3,5-dinitrotoluene       | ND     | 7B         | 74B | benzo(b)fluoranthene       | ND     |                    |     |
| 100                    | 32B | 3,6-dinitrotoluene       | ND     | 9B         | 75B | benzo(c)fluoranthene       | ND     |                    |     |
| 100                    | 34B | 4,6-dinitrohydrazine     | ND     | 18B        | 76B | chrysene                   | ND     |                    |     |
| 100                    | 36B | fluoranthene             | ND     | 2B         | 77B | phenanthrene               | ND     |                    |     |
| 100                    | 38B | 1-methoxy-2-phenyl ether | ND     | 3B         | 78B | anthracene                 | B      |                    |     |

Analytical Serv      REPORT  
Results by Sample

LAB # 86-01-242

Continued From Above

FRACTION 09B      TEST CODE M625 B      NAME Method 625 Base/Neutrals  
Date & Time Collected not specified      Category

|                             |    |     |     |                        |    |
|-----------------------------|----|-----|-----|------------------------|----|
| 4-chlorophenyl phenyl ether | ND | 88  | 79b | benzo(ghi)perylene     | ND |
| 4-chloroisopropyl ether     | ND | 88  | 80B | fluorene               | ND |
| bis(2-chloroethoxy)methane  | ND | 4H  | 81B | phenanthrene B         | ND |
| tetrachlorobutadiene        | ND | 192 | 82B | dibenzo(a,h)anthracene | ND |
| tetrachlorocyclopentadiene  | ND | 375 | 83B | indeno(1,2,3-cd)pyrene | ND |
| isophorone                  | ND | 43P | 84B | pyrene                 | ND |
| naphthalene                 | ND |     |     |                        |    |
| nitrobenzene                | ND |     |     |                        |    |

BT 2011

|                    |     |
|--------------------|-----|
| 1,2-dibromobenzene | 56  |
| 1,3-diphenyl       | 54  |
| 1,4-terphenyl      | 112 |
| 1,1'-biphenyl      |     |

Concentration of 1,2-dibromobenzene  
1,3-diphenyl ether, 1,4-terphenyl  
1,1'-biphenyl, 1,2-dibromobenzene, 1,3-diphenyl ether, 1,4-terphenyl, 1,1'-biphenyl  
and benzo(a)pyrene are eluted  
chromatograms elute high concentrations

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## Results by Sample

NY 100-98 # 127

(Continued From Above)

100

# HALLOWEEN

# THE

## Method 25 Base Neutrals

date & line collected not specified

Category

[illegible]

... blank background subtraction not performed

than method detection limit

... dilution of sample if greater than one (1) - minimum detection

... by long factor

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID dup anal. 825

FRACTION 09B

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

CHRD # 5501242009

SAMPLE SIZE 1

DATE ANALYZED 02/11/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No. PCBs Detected

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID dup anal. 625

FRACTION 09B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 50D01242009

DATE EXTRACTED 01/31/86

ANALYST WJL

VERIFIED BY LAK

CONC FACTOR

DATE INJECTED 02/11/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 88P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 5P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 13P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | acrin aldehyde     | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 901 Anal 922

FRACTION 09B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

UNITES AND CONDITIONS FOR THIS REPORT

Scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified

NO amount detected at EPA detection limit method 625, (Federal Register, 12/3/79)



LAB # 86-01-242

Analytical Serv  
Results by Sample

TEST CODE M525 A NAME Method 625 Acid Compounds  
Date & Time Collected not specified Category

DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK  
DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 11

| DATE     | EPA | COMPOUND                | RESULT | NPDES | SCAN | EPA | COMPOUND                   | RESULT |
|----------|-----|-------------------------|--------|-------|------|-----|----------------------------|--------|
| 01/31/86 | 014 | 2,4,6-trichlorophenol   | 69     | 7A    | 975  | 58A | 4-nitrophenol              | 110    |
| 01/31/86 | 024 | 4-chloro-3-methylphenol | 21     | 5A    | 965  | 59A | 2,4-dinitrophenol          | 43     |
| 01/31/86 | 044 | 2-chlorophenol          | 80     | 4A    | 1054 | 60A | 2-methyl-4,6-dinitrophenol | 74     |
| 01/31/86 | 014 | 2,4-dichlorophenol      | 75     | 9A    | 1168 | 64A | pentachlorophenol          | 175    |
| 01/31/86 | 044 | 2,4-dimethylphenol      | 40     | 10A   | 155  | 65A | phenol                     | 82     |
| 01/31/86 | 074 | 2-nitrophenol           | 46     |       |      |     |                            |        |

## QUALITY ASSURANCE

| TEST CODE | COMPOUND                   | RESULT |
|-----------|----------------------------|--------|
| 01/31/86  | 4-nitrophenol              | 110    |
| 01/31/86  | 2,4-dinitrophenol          | 43     |
| 01/31/86  | 2-methyl-4,6-dinitrophenol | 74     |
| 01/31/86  | pentachlorophenol          | 175    |
| 01/31/86  | phenol                     | 82     |

NOTE: ALL DEFINITIONS FOR THIS REPORT  
Include scan number or retention time on chromatogram  
All results reported in % unless otherwise specified

FILE

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID matrix spike 625

FRACTION 09A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84)

Not detected in reagent blank; background subtraction not performed

Not estimated value; less than method detection limit

CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor



KAPLAN

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID Matrix spike 625

FRACTION 09A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected not specified

Category

|     |      |     |                             |    |     |      |     |                        |    |
|-----|------|-----|-----------------------------|----|-----|------|-----|------------------------|----|
| 140 | 1110 | 418 | 4-bromophenyl phenyl ether  | 76 | 83  | 2376 | 79B | benzo(ghi)perylene     | 69 |
| 120 | 510  | 420 | bis(2-chloroisopropyl)ether | 93 | 32B | 1040 | 80B | fluorene               | 85 |
| 100 | 610  | 420 | bis(2-chloroethoxy)methane  | 78 | 44B | 1192 | 81B | phenanthrene B         | 91 |
| 340 | 714  | 528 | hexachlorobutadiene         | 72 | 19B | 2280 | 82B | dibenzo(a,h)anthracene | 71 |
| 350 | 827  | 538 | hexachlorocyclopentadiene   | 3  | 37B | 2269 | 83B | indeno(1,2,3-cd)pyrene | 89 |
| 360 | 614  | 540 | isophorone                  | 85 | 45B | 1420 | 84B | pyrene                 | 79 |
| 370 | 624  | 550 | naphthalene                 | 74 |     |      |     |                        |    |
| 400 | 520  | 560 | nitrobenzene                | 66 |     |      |     |                        |    |

## APPROXIMATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 520 251   | 45-nitrobenzene 75  |
| 620 600   | 2-fluorobiphenyl 76 |
| 640 560   | d14-terphenyl 43    |
| 660       | d10-biphenyl        |

## APPROXIMATE RETENTION TIMES FOR THIS REPORT

Approximate number of retention time on chromatogram  
 All results reported in this report unless otherwise specified.  
 Not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 1,2,3,4-tetrachlorobenzene and benzo(k)fluoranthene co-elute  
 1,2,3,4-tetrachlorobenzene and chrysene co-elute high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 625 B

FRACTION OYA

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000,1001,1002,1003,1004,1005,1006,1007,1008,1009,1010,1011,1012,1013,1014,1015,1016,1017,1018,1019,1020,1021,1022,1023,1024,1025,1026,1027,1028,1029,1030,1031,1032,1033,1034,1035,1036,1037,1038,1039,1040,1041,1042,1043,1044,1045,1046,1047,1048,1049,1050,1051,1052,1053,1054,1055,1056,1057,1058,1059,1060,1061,1062,1063,1064,1065,1066,1067,1068,1069,1070,1071,1072,1073,1074,1075,1076,1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1109,1110,1111,1112,1113,1114,1115,1116,1117,1118,1119,1120,1121,1122,1123,1124,1125,1126,1127,1128,1129,1130,1131,1132,1133,1134,1135,1136,1137,1138,1139,1140,1141,1142,1143,1144,1145,1146,1147,1148,1149,1150,1151,1152,1153,1154,1155,1156,1157,1158,1159,1160,1161,1162,1163,1164,1165,1166,1167,1168,1169,1170,1171,1172,1173,1174,1175,1176,1177,1178,1179,1180,1181,1182,1183,1184,1185,1186,1187,1188,1189,1190,1191,1192,1193,1194,1195,1196,1197,1198,1199,1200,1201,1202,1203,1204,1205,1206,1207,1208,1209,1210,1211,1212,1213,1214,1215,1216,1217,1218,1219,1220,1221,12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RECEIVED 01/31/85

Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID reagent blank 625

FRACTION 09C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 28501242C09  
C9C FACTOR 1

DATE EXTRACTED 01/31/86  
DATE INJECTED 02/11/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN# | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|-------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A         | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 2A          | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A          | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A          | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A          | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 5A          | 37A | 2-nitrophenol           | ND     |            |     |                            |        |

SPOT-CHECK RECOVERIES

| SPOT-CHECK | COMPOUND             | RESULT |
|------------|----------------------|--------|
| 0001 001   | 45-phenol            | 74     |
| 0002 002   | 2-fluorophenol       | 69     |
| 0003 003   | 2,4,6-tribromophenol | 41     |
| 0004       | 33-phenol            |        |

NPDES AND SEPARATIONS FOR THIS REPORT

SPOT-CHECK number or retention time on chromatogram

All results reported in ug/l unless otherwise specified

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DATE: 01/31/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 09C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

NO DETECTION DETECTED AT EPA detection limit method 625, (Federal Register, 11/26/84).

NO DETECTION DETECTED IN REAGENT BLANK; background subtraction not performed.

NO ESTIMATED VALUE LESS THAN METHOD DETECTION LIMIT.

CRACK FACTOR indicates dilution of sample if greater than one (1). Minimum detection

limit should be multiplied by conc factor.

LAB # 86-01-242

REPORT

Analytical Serv

Results by Sample

FRACTION 09C TEST CODE M625 B NAME Method 625 Base/Neutrals  
Date & time Collected not specified Category

| DATE RECEIVED |      | DATE EXTRACTED |                             | ANALYST    |            | WJL  |                            | VERIFIED BY LAB    |  |
|---------------|------|----------------|-----------------------------|------------|------------|------|----------------------------|--------------------|--|
| LABORATORY    |      | DATE INJECTED  |                             | INSTRUMENT |            | 5100 |                            | COMPOUNDS DETECTED |  |
| NO.           | SCAN | CPD            | COMPOUND                    | RESULT     | NPDES SCAN | EPA  | COMPOUND                   | RESULT             |  |
| 10            | 10   | 10             | acenaphthene                | ND         | 418        | 618  | N-nitrosodimethylamine     | ND                 |  |
| 20            | 20   | 20             | benzidine                   | ND         | 432        | 628  | N-nitrosodiphenylamine     | ND                 |  |
| 30            | 30   | 30             | 1,2,4-trichlorobenzene      | ND         | 425        | 632  | N-nitrosodi-n-propylamine  | ND                 |  |
| 40            | 40   | 40             | hexachlorobenzene           | ND         | 130        | 668  | bis(2-ethylhexyl)phthalate | ND                 |  |
| 50            | 50   | 50             | hexachloroethane            | ND         | 152        | 678  | butyl benzyl phthalate     | ND                 |  |
| 60            | 60   | 60             | bis(2-chloroethyl)ether     | ND         | 268        | 688  | di-butyl phthalate         | ND                 |  |
| 70            | 70   | 70             | 2-chloronaphthalene         | ND         | 298        | 698  | di-n-octyl phthalate       | ND                 |  |
| 80            | 80   | 80             | 1,2-dichlorobenzene         | ND         | 245        | 708  | diethyl phthalate          | ND                 |  |
| 90            | 90   | 90             | 1,3-dichlorobenzene         | ND         | 250        | 718  | dimethyl phthalate         | ND                 |  |
| 100           | 100  | 100            | 1,4-dichlorobenzene         | ND         | 52         | 728  | benzo(a)anthracene A       | ND                 |  |
| 110           | 110  | 110            | 2,1-dichlorobenzidine       | ND         | 60         | 738  | benzo(a)pyrene             | ND                 |  |
| 120           | 120  | 120            | 2,4-dinitrotoluene          | ND         | 70         | 748  | benzo(b)fluoranthene       | ND                 |  |
| 130           | 130  | 130            | 2,6-dinitrotoluene          | ND         | 90         | 758  | benzo(k)fluoranthene       | ND                 |  |
| 140           | 140  | 140            | 1,2,4-trichlorobenzidine    | ND         | 188        | 768  | chrysene A                 | ND                 |  |
| 150           | 150  | 150            | fluoranthene                | ND         | 20         | 778  | acenaphthylene             | ND                 |  |
| 160           | 160  | 160            | 4-chlorophenyl phenyl ether | ND         | 30         | 788  | anthracene B               | ND                 |  |





LAB # 86-01-242  
Continued From Above

Analytical Method: NAME Method 625 Base/Neutrals  
Category: the collected not specified

Minimum detection

Lab # 85000000

Male Make = White No Characterization  
 Date = The collected not specified

Category

Group 1  
 Group 2  
 Group 3

Group 4

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID reagent blank 625

FRACTION 09C

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 50601242C02

DATE EXTRACTED 01/31/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/11/86

COMPOUNDS DETECTED 0

| APDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 87P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 5P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 1P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 13P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 14P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 17P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 09C

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 250104 H2O

FRACTION 10A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE 50001242C10 DATE EXTRACTED 01/31/86 ANALYST WJL VERIFIED BY LAK  
 FACTOR 1 DATE INJECTED 02/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 0

| REPORT SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|-------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A         | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 2A          | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A          | 14A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 3A          | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 4           | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 1A          | 17A | 2-nitrophenol           | ND     |            |     |                            |        |

CONCENTRATION UNITS: MICROGRAMS PER LITER

| REPORT SCAN | EPA | COMPOUND          | RESULT |
|-------------|-----|-------------------|--------|
| 5A          | 51  | d5-phenol         | 42     |
| 6A          | 52  | 2-chlorophenol    | 54     |
| 7A          | 53  | 4,6-dibromophenol | 41     |
| 8A          | 54  | d3-phenol         |        |

NOTE: See Instructions For this Report

51A, 52A, 53A, 54A: Retention time in chromatogram

51, 52, 53, 54: Results reported in ug/l unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAL # 86-01-242

Continued From Above

SAMPLE ID 850104 H2U

FRACTION 10A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
 Not detected in reagent blank, background subtraction not performed  
 Estimated value, less than method detection limit  
 CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection  
 limits should be multiplied by conc factor

[illegible]

一、  
 二、  
 三、  
 四、  
 五、  
 六、  
 七、  
 八、  
 九、  
 十、

FRACTION 10A

Date &amp; Time Collected 01/30/86

| DATA FILE # | DATE EXTRACTED | ANALYST    | WJL                        | VERIFIED BY        |
|-------------|----------------|------------|----------------------------|--------------------|
| LAB FACTOR  | DATE INJECTED  | INSTRUMENT | 5100                       | LAKE               |
|             |                |            |                            | COMPOUNDS DETECTED |
| 1           | 01/21/86       |            |                            | 0                  |
| 100         | 1B             | 41B        | N-nitrosodimethylamine     | ND                 |
| 40          | 5B             | 43B        | N-nitrosodiphenylamine     | ND                 |
| 450         | 6B             | 42B        | N-nitrosodi-n-propylamine  | ND                 |
| 330         | 9B             | 13B        | bis(2-ethylhexyl)phthalate | ND                 |
| 340         | 12B            | 15B        | butyl benzyl phthalate     | ND                 |
| 110         | 10B            | 26B        | di-butyl phthalate         | ND                 |
| 140         | 10B            | 29B        | di-n-octyl phthalate       | ND                 |
| 400         | 25B            | 24B        | diethyl phthalate          | ND                 |
| 116         | 25B            | 29B        | dimethyl phthalate         | ND                 |
| 220         | 27B            | 5B         | benzo(a)anthracene         | ND                 |
| 100         | 28B            | 6B         | benzo(a)pyrene             | ND                 |
| 270         | 29B            | 7B         | benzo(b)fluoranthene       | ND                 |
| 250         | 30B            | 9B         | benzo(k)fluoranthene       | ND                 |
| 400         | 30B            | 10B        | chrysene                   | ND                 |
| 310         | 33B            | 20         | acenaphthylene             | ND                 |
| 170         | 40B            | 30         | anthracene                 | ND                 |



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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

Continued From Above

SAMPLE ID 850104 H2D

FRACTION 10A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 146 | 418 | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 128 | 428 | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 108 | 438 | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 348 | 528 | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 358 | 538 | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 368 | 548 | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 398 | 598 | naphthalene                 | ND |     |     |                        |    |
| 408 | 558 | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 578 851   | d5-nitrobenzene 59  |
| 851 852   | 2-fluorobiphenyl 78 |
| 1447 853  | d14-terphenyl 40    |
| 854       | d10 biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number of retention time on chromatogram  
 All results reported in \_\_\_\_\_ unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A (benzo(a)anthracene and chrysene co-elute) high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

Continued From Above

SAMPLE ID 850104 H2O

FRACTION 10A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

3 = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

U = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-01-242

SAMPLE ID 860104 H20

FRACTION 10A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CHRO # 2901242010

SAMPLE SIZE 1

DATE ANALYZED 02/11/86

UNITS ug/l

VERIFIED BY LAK

• SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs Detected

8825 94

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Analytical Serv

REPORT

LAB # 86-01-242

Results by Sample

SAMPLE ID 850104 H20

FRACTION 10A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

DATA FILE 85001242010

DATE EXTRACTED 01/31/86

ANALYST

VERIFIED BY LAK

CONC FACTOR

DATE INJECTED 02/11/86

WJL

COMPOUNDS DETECTED 0

| EPDS SCAN | EP A | COMPOUND           | RESULT | NPDES SCAN | EP A | COMPOUND  | RESULT |
|-----------|------|--------------------|--------|------------|------|-----------|--------|
| 1P        | 84P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P       | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 3P        | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P        | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 6P        | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 4P        | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P       | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 13P       | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P       | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P       | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P       | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 15P       | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P       | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-01-242

(Continued From Above)

SAMPLE ID B50104 H20

FRACTION 10A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

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Analytical Serv

REPORT

NonReported Work

LAB # 86-01-242

QUALITY AND TEST CLOSERS FOR WORK NOT REPORTED ELSEWHERE

15 1 DUE IN 3  
20 1 DUE IN 3  
25 1 DUE IN 3  
30 1 DUE IN 3  
35 1 DUE IN 3  
40 1 DUE IN 3  
45 1 DUE IN 3  
50 1 DUE IN 3  
55 1 DUE IN 3  
60 1 DUE IN 3

PAGE 1  
RECEIVED: 02/01/86

Analytical Serv  
02/27/86 17:16:51

LAB # 86-02-001

REPORT Radian  
TO BL 4  
Austin  
ATTEN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

*Carol Smith*  
CERTIFIED BY  
CONTACT CONOVER

WORK ID water samples  
TAKEN NR, AM  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

\*\*Unknown compound eluting here.  
Second column confirmation performed for EPA 601 on -01 through -06.

## Footnotes and Comments

- \* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.
- @ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

|    |        |
|----|--------|
| 01 | 860109 |
| 02 | 860110 |
| 03 | 860111 |
| 03 | 860111 |
| 04 | 860112 |
| 05 | 860113 |
| 06 | 860114 |

## Analytical Serv TEST CODES and NAMES used on this report

|        |                          |
|--------|--------------------------|
| AG E   | Silver, ICPEs            |
| AS GA  | Arsenic, low level       |
| BA E   | Barium, ICPEs            |
| CD E   | Cadmium, ICPEs           |
| CR E   | Chromium, ICPEs          |
| DG3020 | Digestion by Method 3020 |
| DG6010 | Digestion by Method 6010 |
| GC 601 | EPA Method 601/GC        |
| GC 602 | EPA Method 602/GC        |
| HC IR  | Hydrocarbons in soil     |
| HG CA  | Mercury, Cold Vapor      |
| ONG IR | Oil and Grease, Infrared |
| PB GA  | Lead, low level          |
| SE GA  | Selenium, low level      |

PAGE 2  
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Analytical Serv  
RESULTS BY TEST

LAB # 86-02-001

| TEST CODE               | Sample 01<br>(entered units) | Sample 02<br>(entered units) | Sample 03<br>(entered units) | Sample 04<br>(entered units) | Sample 05<br>(entered units) |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| AG_E<br>ug/ml           | 0.005*                       | 0.011                        | 0.008*                       | 0.012                        | 0.019                        |
| AS_GA<br>ug/ml          | <.005                        | <.005                        | <.005                        | <.005                        | <.005                        |
| BA_E<br>ug/ml           | 0.11                         | 0.095                        | 0.050                        | 0.023                        | 0.12                         |
| CD_E<br>ug/ml           | <.002                        | 0.003*                       | 0.003*                       | <.002                        | 0.003*                       |
| CR_E<br>ug/ml           | 0.14                         | 0.007*                       | 0.013*                       | 0.017*                       | 0.13                         |
| DC3020<br>date complete | 02/05/86                     | 02/05/86                     | 02/05/86                     | 02/05/86                     | 02/05/86                     |
| DC6010<br>date complete | 02/10/86                     | 02/10/86                     | 02/10/86                     | 02/10/86                     | 02/10/86                     |
| HC_IR<br>ug/g           | <.0002                       | <1.0<br>mg/L                 | <1.0<br>mg/L                 | <.0002                       | <.0002                       |
| HG_CA<br>ug/ml          | <.0002                       | <1.0                         | <1.0                         | <.0002                       | <.0002                       |
| ONG_IR<br>mg/L          | <.002                        | <.002                        | 0.003*                       | <.002                        | 0.009                        |
| PB_GA<br>ug/ml          | <.003                        | <.003                        | <.003                        | <.003                        | <.003                        |
| SE_GA<br>ug/ml          | <.003                        | <.003                        | <.003                        | <.003                        | <.003                        |



| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| AG_E          | 0.016           |
| ug/ml         |                 |
| AS_GA         | <.005           |
| ug/ml         |                 |
| BA_E          | 0.053           |
| ug/ml         |                 |
| CD_E          | 0.003*          |
| ug/ml         |                 |
| CR_E          | 0.024*          |
| ug/ml         |                 |
| DG3020        | 02/05/86        |
| date complete |                 |
| DG6010        | 02/10/86        |
| date complete |                 |
| HG_CA         | <.0002          |
| ug/ml         |                 |
| PB_GA         | <.002           |
| ug/ml         |                 |
| SE_GA         | <.003           |
| ug/ml         |                 |

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Analytical Serv REPORT

RECEIVED: 02/01/86

Results by Sample

SAMPLE ID 860109

FRACTION 01A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

DATA FILE 0 DATE INJECTED 02/03/86

ANALYST RP VERIFIED BY MCL  
INSTRUMENT 9 COMPOUNDS DETECTED 3

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                  | RESULT |
|------|---------------------------|--------|------|---------------------------|--------|
|      | Chloromethane             | ND     | 3    | Trichloroethene           | 2314   |
|      | Bromomethane              | ND     |      | Dibromochloromethane      | *      |
|      | Vinyl Chloride            | ND     |      | 1,1,2-Trichloroethane     | *      |
|      | Chloroethane              | ND     |      | cis-1,3-Dichloropropene   | *      |
|      | Methylene Chloride        | ND     |      | 2-Chloroethylvinyl Ether  | ND     |
|      | Trichlorofluoromethane    | ND     |      | Bromoform                 | ND     |
|      | 1,1-Dichloroethene        | ND     |      | 1,1,2,2-Tetrachloroethane | #      |
|      | 1,1-Dichloroethane        | ND     |      | Tetrachloroethylene       | #      |
| 1    | trans-1,2-Dichloroethene  | 6.37   |      | Chlorobenzene             | ND     |
|      | Chloroform                | ND     |      | 1,3-Dichlorobenzene       | ND     |
|      | 1,2-Dichloroethane        | ND     |      | 1,2-Dichlorobenzene       | ND     |
| 2    | 1,1,1-Trichloroethane     | 235    |      | 1,4-Dichlorobenzene       | ND     |
|      | Carbon Tetrachloride      | ND     |      |                           |        |
|      | Bromodichloromethane      | ND     |      |                           |        |
|      | 1,2-Dichloropropane       | ND     |      |                           |        |
|      | trans-1,3-Dichloropropene | ND     |      |                           |        |

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 RECEIVED: 02/01/86  
 SAMPLE ID 860109  
 Analytical Serv REPORT  
 Results by Sample  
 LAB # 86-02-001  
 Continued From Above  
 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 01/31/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-001

SAMPLE ID 860109

FRACTION 01C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/31/86 Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/03/86 ANALYST \_\_\_\_\_ RE VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-001

SAMPLE ID 860110

FRACTION 02A

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 01/31/86

Category

DATA FILE \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_  
DATE INJECTED 02/03/86ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_  
RP \_\_\_\_\_  
COMPOUNDS DETECTED 1

VERIFIED BY MCL

| SCAN | COMPOUND                        | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane                   | ND     | —    | Trichloroethene             | ND     |
| —    | Bromomethane                    | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride                  | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane                    | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride              | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane          | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene              | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane              | ND     | —    | Tetrachloroethylene #       | ND     |
| 1    | trans-1,2-Dichloroethene 10.9** |        | —    | Chlorobenzene               | ND     |
| —    | Chloroform                      | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane              | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane           | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride            | ND     |      |                             |        |
| —    | Bromodichloromethane            | ND     |      |                             |        |
| —    | 1,2-Dichloropropane             | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene       | ND     |      |                             |        |

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SAMPLE ID 860110

Analytical Serv  
Results by Sample

REPORT  
LAB # 86-02-001  
Continued From Above

FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 01/31/86 Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-001

SAMPLE ID 860110

FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/31/86 Category

DATA FILE      D DATE INJECTED 02/03/86 ANALYST      RP VERIFIED BY MCL  
CONC. FACTOR      INSTRUMENT      d COMPOUNDS DETECTED      0

| SCAN        | COMPOUND      | RESULT      | SCAN        | COMPOUND            | RESULT    |
|-------------|---------------|-------------|-------------|---------------------|-----------|
| <u>    </u> | Benzene       | <u>ND</u> ; | <u>    </u> | 1,4-Dichlorobenzene | <u>ND</u> |
| <u>    </u> | Toluene       | <u>ND</u> ; | <u>    </u> | 1,3-Dichlorobenzene | <u>ND</u> |
| <u>    </u> | Ethyl Benzene | <u>ND</u> ; | <u>    </u> | 1,2-Dichlorobenzene | <u>ND</u> |
| <u>    </u> | Chlorobenzene | <u>ND</u> ; |             |                     |           |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in      ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-001

SAMPLE ID 860111

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 01/31/86

Category

| DATA FILE    | Q                          | DATE INJECTED | 02/03/86 | ANALYST                        | RP     | VERIFIED BY        | MCL |
|--------------|----------------------------|---------------|----------|--------------------------------|--------|--------------------|-----|
| CONC. FACTOR |                            |               |          | INSTRUMENT                     | g      | COMPOUNDS DETECTED | 1   |
| SCAN         | COMPOUND                   | RESULT        | SCAN     | COMPOUND                       | RESULT |                    |     |
|              | Chloromethane              | ND            |          | Trichloroethene                | ND     |                    |     |
|              | Bromomethane               | ND            |          | Dibromochloromethane *         | ND     |                    |     |
|              | Vinyl Chloride             | ND            |          | 1, 1, 2-Trichloroethane *      | ND     |                    |     |
|              | Chloroethane               | ND            |          | cis-1, 3-Dichloropropene *     | ND     |                    |     |
|              | Methylene Chloride         | ND            |          | 2-Chloroethylvinyl Ether       | ND     |                    |     |
|              | Trichlorofluoromethane     | ND            |          | Bromoform                      | ND     |                    |     |
|              | 1, 1-Dichloroethene        | ND            |          | 1, 1, 2, 2-Tetrachloroethane # | ND     |                    |     |
|              | 1, 1-Dichloroethane        | ND            |          | Tetrachloroethylene #          | ND     |                    |     |
| 1            | trans-1, 2-Dichloroethene  | 11.3**        |          | Chlorobenzene                  | ND     |                    |     |
|              | Chloroform                 | ND            |          | 1, 3-Dichlorobenzene           | ND     |                    |     |
|              | 1, 2-Dichloroethane        | ND            |          | 1, 2-Dichlorobenzene           | ND     |                    |     |
|              | 1, 1, 1-Trichloroethane    | ND            |          | 1, 4-Dichlorobenzene           | ND     |                    |     |
|              | Carbon Tetrachloride       | ND            |          |                                |        |                    |     |
|              | Bromodichloromethane       | ND            |          |                                |        |                    |     |
|              | 1, 2-Dichloropropane       | ND            |          |                                |        |                    |     |
|              | trans-1, 3-Dichloropropene | ND            |          |                                |        |                    |     |



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 SAMPLE ID 860111  
 Analytical Serv REPORT  
 Results by Sample  
 LAB # 86-02-001  
 Continued From Above  
 FRACTION Q3A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 01/31/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-001

SAMPLE ID 860111

FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 01/31/86 Category

DATA FILE     D     DATE INJECTED 02/04/86  
CONC. FACTOR     

ANALYST     RP     VERIFIED BY MCL  
INSTRUMENT     d     COMPOUNDS DETECTED     0    

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in      ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-001

SAMPLE ID 860112

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

|              |                           |               |          |                             |        |                    |     |
|--------------|---------------------------|---------------|----------|-----------------------------|--------|--------------------|-----|
| DATA FILE    | 9                         | DATE INJECTED | 02/04/86 | ANALYST                     | RP     | VERIFIED BY        | MCL |
| CONC. FACTOR |                           |               |          | INSTRUMENT                  | 9      | COMPOUNDS DETECTED | 2   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                    | RESULT |                    |     |
|              | Chloromethane             | ND            | 2        | Trichloroethene             | 2015   |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane *      | ND     |                    |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane *     | ND     |                    |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene *   | ND     |                    |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether    | ND     |                    |     |
|              | Trichlorofluoromethane    | ND            |          | Bromoform                   | ND     |                    |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane # | ND     |                    |     |
|              | 1,1-Dichloroethane        | ND            |          | Tetrachloroethylene #       | ND     |                    |     |
| 1            | trans-1,2-Dichloroethene  | 298           |          | Chlorobenzene               | ND     |                    |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene         | ND     |                    |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene         | ND     |                    |     |
|              | 1,1,1-Trichloroethane     | ND            |          | 1,4-Dichlorobenzene         | ND     |                    |     |
|              | Carbon Tetrachloride      | ND            |          |                             |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                             |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                             |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                             |        |                    |     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-001

Continued From Above

SAMPLE ID 860112

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Results by Sample

REPORT

LAB # 86-02-001

SAMPLE ID 860112

FRACTION 04C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 01/31/86

Category

DATA FILE       D        
CONC. FACTOR       

DATE INJECTED 02/04/86

ANALYST        RP         
INSTRUMENT        d       

VERIFIED BY MCL  
COMPOUNDS DETECTED   Q  

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

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## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram

All results reported in        ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-001

FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

| DATA FILE | CONC                      | FACTOR | DATE INJECTED | ANALYST                     | RP     | VERIFIED BY        |
|-----------|---------------------------|--------|---------------|-----------------------------|--------|--------------------|
|           |                           |        | 02/04/86      | INSTRUMENT                  | 2      | COMPOUNDS DETECTED |
| SCAN      | COMPOUND                  | RESULT | SCAN          | COMPOUND                    | RESULT |                    |
|           | Chloromethane             | ND     | 2             | Trichloroethene             | 390    |                    |
|           | Bromomethane              | ND     |               | Dibromochloromethane *      | ND     |                    |
|           | Vinyl Chloride            | ND     |               | 1,1,2-Trichloroethene *     | ND     |                    |
|           | Chloroethane              | ND     |               | cis-1,3-Dichloropropene *   | ND     |                    |
|           | Methylene Chloride        | ND     |               | 2-Chloroethylvinyl Ether    | ND     |                    |
|           | Trichlorofluoromethane    | ND     |               | Bromoform                   | ND     |                    |
|           | 1,1-Dichloroethene        | ND     |               | 1,1,2,2-Tetrachloroethane # | ND     |                    |
|           | 1,1-Dichloroethane        | ND     |               | Tetrachloroethylene #       | ND     |                    |
| 1         | trans-1,2-Dichloroethene  | 136**  |               | Chlorobenzene               | ND     |                    |
|           | Chloroform                | ND     |               | 1,3-Dichlorobenzene         | ND     |                    |
|           | 1,2-Dichloroethane        | ND     |               | 1,2-Dichlorobenzene         | ND     |                    |
|           | 1,1,1-Trichloroethane     | ND     |               | 1,4-Dichlorobenzene         | ND     |                    |
|           | Carbon Tetrachloride      | ND     |               |                             |        |                    |
|           | Bromodichloromethane      | ND     |               |                             |        |                    |
|           | 1,2-Dichloropropane       | ND     |               |                             |        |                    |
|           | trans-1,3-Dichloropropene | ND     |               |                             |        |                    |

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ANALYTICAL SERV  
Results by Sample  
LAB # 86-02-001  
Continued From Above  
SAMPLE ID 860113  
FRACTION 05A  
TEST CODE GC 601  
NAME EPA Method 601/GC  
Date & Time Collected 01/31/86  
Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79)  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-001

SAMPLE ID 860113

FRACTION OSC

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 01/31/86

Category

DATA FILE 0 DATE INJECTED 02/04/86 ANALYST RP VERIFIED BY MCL  
CONC. FACTOR      INSTRUMENT 4 COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND     | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND     | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND     | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND     |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



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REPORT

Results by Sample

LAB # 86-02-001

SAMPLE ID 860114

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

DATA FILE Q DATE INJECTED 02/04/86

CONC. FACTOR     

ANALYST

RP

INSTRUMENT g

VERIFIED BY MGL

COMPOUNDS DETECTED 2

| SCAN        | COMPOUND                  | RESULT       | SCAN        | COMPOUND                    | RESULT     |
|-------------|---------------------------|--------------|-------------|-----------------------------|------------|
| <u>    </u> | Chloromethane             | <u>ND</u>    | <u>2</u>    | Trichloroethene             | <u>402</u> |
| <u>    </u> | Bromomethane              | <u>ND</u>    | <u>    </u> | Dibromochloromethane *      | <u>ND</u>  |
| <u>    </u> | Vinyl Chloride            | <u>ND</u>    | <u>    </u> | 1,1,2-Trichloroethane *     | <u>ND</u>  |
| <u>    </u> | Chloroethane              | <u>ND</u>    | <u>    </u> | cis-1,3-Dichloropropene *   | <u>ND</u>  |
| <u>    </u> | Methylene Chloride        | <u>ND</u>    | <u>    </u> | 2-Chloroethylvinyl Ether    | <u>ND</u>  |
| <u>    </u> | Trichlorofluoromethane    | <u>ND</u>    | <u>    </u> | Bromoform                   | <u>ND</u>  |
| <u>    </u> | 1,1-Dichloroethene        | <u>ND</u>    | <u>    </u> | 1,1,2,2-Tetrachloroethane # | <u>ND</u>  |
| <u>    </u> | 1,1-Dichloroethane        | <u>ND</u>    | <u>    </u> | Tetrachloroethylene #       | <u>ND</u>  |
| <u>1</u>    | trans-1,2-Dichloroethene  | <u>160**</u> | <u>    </u> | Chlorobenzene               | <u>ND</u>  |
| <u>    </u> | Chloroform                | <u>ND</u>    | <u>    </u> | 1,3-Dichlorobenzene         | <u>ND</u>  |
| <u>    </u> | 1,2-Dichloroethane        | <u>ND</u>    | <u>    </u> | 1,2-Dichlorobenzene         | <u>ND</u>  |
| <u>    </u> | 1,1,1-Trichloroethane     | <u>ND</u>    | <u>    </u> | 1,4-Dichlorobenzene         | <u>ND</u>  |
| <u>    </u> | Carbon Tetrachloride      | <u>ND</u>    |             |                             |            |
| <u>    </u> | Bromodichloromethane      | <u>ND</u>    |             |                             |            |
| <u>    </u> | 1,2-Dichloropropane       | <u>ND</u>    |             |                             |            |
| <u>    </u> | trans-1,3-Dichloropropene | <u>ND</u>    |             |                             |            |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-001

Continued From Above

SAMPLE ID 860114

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 01/31/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601. (Federal Register, 12/3/79)  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
\*1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-001

Results by Sample

SAMPLE ID 860114

FRACTION 06C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 01/31/86

Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/04/86 ANALYST \_\_\_\_\_ RP VERIFIED BY MCL  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ g COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND     | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND     | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND     | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND     |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram

All results reported in ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79)

DECONTAMINATION

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NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |         |   |     |        |
|-----|---|---------|---|-----|--------|
| 01B | : | DUP 601 | : |     |        |
| 02B | : | DUP 601 | : | 02E | DUP MS |
| 03B | : | DUP 601 | : |     |        |
| 03E | : | DUP MS  | : |     |        |
| 04B | : | DUP 601 | : |     |        |
| 05B | : | DUP 601 | : |     |        |
| 06B | : | DUP 601 | : |     |        |

LAB # 86-02-004

REFUR

85 14 32 36

*UPM*

ANALYTICAL Radian Analytical Services

6501 Mopac Blvd

P.O. Box 9948

Austin, Texas 78766

CERTIFIED BY

PHONE (512) 454-4797

CONTACT FRENCH

SAMPLE # 6

General Dynamics

Plant 4 Bldg 4

Austin, Texas

Plant 4

General Dynamics

Plant 4 Bldg 4

Austin, Texas

Plant 4

General Dynamics

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit  
Potential error for such low values ranges between  
50 and 100%

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present

ANALYSIS IDENTIFICATION

Analytical Serv TEST CODES and NAMES used on this report

EX-225 Extraction only - 625 BN/A

MS-A Method 625 Acid Compounds

MS-B Method 625 Base/Neutrals

MS-C MSMS Characterization-ADN

MS-D MSMS Pesticides & PCBs by GC/MS

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 Analytical Serv  
 REPORT  
 RESULTS BY TEST  
 LAB # 86-02-004

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| EX 625        | 02/03/86        | 02/03/86        | 02/03/86        | 02/03/86        | 02/03/86        |
| date complete |                 |                 |                 |                 |                 |

| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| EX 625        | 02/03/86        |
| date complete |                 |

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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 860110 H2O

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE 22002004C01  
W FACTOR 1

DATE EXTRACTED 02/03/86  
DATE INJECTED 02/11/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 314        | 314 | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 324        | 324 | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 344        | 344 | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 31A        | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 34A        | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 37A        | 37A | 2-nitrophenol           | ND     |            |     |                            |        |

NPDES SCAN RECOVERIES

| NPDES SCAN | COMPOUND       | RESULT |
|------------|----------------|--------|
| 311        | 4's phenol     | 62     |
| 321        | 2-chlorophenol | 72     |
| 331        | 4-chlorophenol | 50     |
| 341        | 4's phenol     |        |

NPDES SCAN RECOVERIES

NPDES SCAN number of retention time on chromatogram  
NPDES SCAN reported in 01/1 unless otherwise specified.

LAB # 86-02-004  
Continued From Above

ANALYTICAL SERV  
RESULTS BY SAMPLE

FRACTION 01A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
Not detected in reagent blank, background subtraction not performed.  
Estimated value less than method detection limit.  
Indicates dilution of sample if greater than one (1). Minimum detection  
factor should be multiplied by conc factor



LAB # 86-02-004

REPORT

Results by sample

NAME: 16010001A  
 ID: 16010001A  
 DATE: 01/30/86  
 METHOD: 625 Base/Neutrals  
 CATEGORY:

| CONCENTRATION | DATE | RECEIVED | EPA | QUALITY | WJL | VERIFIED BY LAK             |
|---------------|------|----------|-----|---------|-----|-----------------------------|
| PPM           | MM   | YY       |     | TEST    | PPM | COMPOUNDS DETECTED          |
| 0.000         | 01   | 41B      | 61B |         | 14  | nitrosodimethylamine ND     |
| 0.000         | 01   | 41F      | 62B |         | 14  | nitrosodiphenylamine ND     |
| 0.000         | 01   | 41F      | 63B |         | 14  | nitrosodipropylamine ND     |
| 0.000         | 01   | 41F      | 64B |         | 14  | nitrosodimethylphthalate ND |
| 0.000         | 01   | 41F      | 65B |         | 14  | benzyl phthalate ND         |
| 0.000         | 01   | 41F      | 66B |         | 14  | butyl phthalate ND          |
| 0.000         | 01   | 41F      | 67B |         | 14  | hexyl phthalate ND          |
| 0.000         | 01   | 41F      | 68B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 69B |         | 14  | dimethyl phthalate ND       |
| 0.000         | 01   | 41F      | 70B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 71B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 72B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 73B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 74B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 75B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 76B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 77B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 78B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 79B |         | 14  | diethyl phthalate ND        |
| 0.000         | 01   | 41F      | 80B |         | 14  | diethyl phthalate ND        |



LAB # 86-02-004

REPORT

Results by Sample

Continued From Above

FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals  
Date & Time Collected 01/30/86 Category

and phenanthrene co-elute in high concentrations.  
reagent blank, background subtraction not performed.

value less than method detection limit.

indicates dilution of sample if greater than one (1). Minimum detection  
should be multiplied by conc. factor.

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REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 850110 H20

FRACTION Q1A

TEST CODE MSNS S NAME GCMS Characterization-Alt

Date & Time Collected 01/30/86

Category

CHRD # 5U02004C01

SAMPLE SIZE 1

DATE ANALYZED 02/11/86

UNITS ug/L

RECEIVED BY

SCAN

COMPOUND

RESULT

CONF. REF.  
TEST. CONF.

No PCBs Detected

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Analytical Serv  
Results by Sample

LAB # 86-02-004

SAMPLE ID 850110 H20

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC MS  
Date & Time Collected 01/30/86

Category

DATA FILE 50002004C01  
CONC FACTOR

DATE EXTRACTED 02/03/86  
DATE INJECTED 02/11/86

ANALYST

WOL  
VERIFIED BY LAR  
COMPOUNDS DETECTED

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 2P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 15P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 16P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 17P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
|            | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID 860110 H20

FRACTION 01A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID 860111 HED

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 01/30/86

Category

DATA FILE 86020904C02  
DATA FACTOR 1DATE EXTRACTED 02/03/86  
DATE INJECTED 02/11/86ANALYST  
INSTRUMENTWJL  
5100VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 3A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 21A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 24A | 4-dimethylphenol        | ND     | 10A        | 45A 65A | phenol                     | 3      |
| 4A         | 21A | 2-nitrophenol           | ND     |            |         |                            |        |

## SURrogate RECOVERIES

| SCAN CODE | COMPOUND                   | RESULT |
|-----------|----------------------------|--------|
| 45A 401   | 45-phenol                  | ND     |
| 41A 402   | 2,4-dinitrophenol          | ND     |
| 10A 403   | 2-methyl-4,6-dinitrophenol | ND     |
| 40A       | phenol                     | ND     |

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram

All results reported in this report unless otherwise specified

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ANALYST: J. L. BERRY

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850111 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

NO 2 not detected at EPA detection limit method 625 (Federal Register 11/26/81)  
SL not detected in reagent blank, background subtraction not performed  
2.5 estimated value, less than method detection limit  
CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection  
limits should be multiplied by conc factor



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Analytical Serv

REP JH

Results by Sample

SAMPLE ID 850111 H2O

FRACTION 02A

TEST CODE M225 B NAME Method See Case Neutra.S

Date : Time Collected 01/30/85

Category

DATA FILE 8502004002

DATE EXTRACTED 02/03/85

ANALYST

CORC FACTOR 1

DATE INJECTED 02/11/85

INSTRUMENT

5133

REPT 111

DATE 01/30/85

| NPDES SCAN | EPA | COMPOUND                           | RESULT | NPDES SCAN | EPA | COMPOUND                            | WT  |
|------------|-----|------------------------------------|--------|------------|-----|-------------------------------------|-----|
| 13         | 18  | acenaphthene                       | ND     | 41E        | 61E | 1,1-dinitro-2,2-dimethyl-2-propanol | 100 |
| 48         | 55  | benzidine                          | ND     | 43B        | 62B | 1,1-dinitro-2,2-dimethyl-2-propanol | 100 |
| 465        | 85  | 1,2,4-trichlorobenzene             | ND     | 42B        | 63B | 1,1-dinitro-2,2-dimethyl-2-propanol | 100 |
| 33B        | 98  | hexachlorobenzene                  | ND     | 13B        | 66B | bis(2-ethylhexyl) phthalate         | 100 |
| 36B        | 128 | hexachloroethane                   | ND     | 15B        | 67B | butyl benzyl phthalate              | 100 |
| 11B        | 183 | bis(2-chloroethyl) ether           | ND     | 26B        | 68B | di-n-butyl phthalate                | 100 |
| 16B        | 208 | 2-chloronaphthalene                | ND     | 29B        | 69B | di-n-butyl phthalate                | 100 |
| 20B        | 255 | 1,2-dichlorobenzene                | ND     | 24B        | 70B | di-n-butyl phthalate                | 100 |
| 21B        | 265 | 1,3-dichlorobenzene                | ND     | 25B        | 71B | di-n-butyl phthalate                | 100 |
| 23B        | 278 | 1,4-dichlorobenzene                | ND     | 5B         | 72B | di-n-butyl phthalate                | 100 |
| 23B        | 302 | 3,3'-dichlorobenzidine             | ND     | 6B         | 73B | di-n-butyl phthalate                | 100 |
| 27B        | 343 | 2,4-dinitrotoluene                 | ND     | 71         | 74B | di-n-butyl phthalate                | 100 |
| 28B        | 348 | 2,6-dinitrotoluene                 | ND     | 4C         | 75B | di-n-butyl phthalate                | 100 |
| 27B        | 376 | 1,1-diphenyl-2,2,2-trichloroethane | ND     | 141        | 76B | di-n-butyl phthalate                | 100 |
| 21B        | 393 | 1,1-diphenyl-2,2,2-trichloroethane | ND     | 141        | 77B | di-n-butyl phthalate                | 100 |
| 27B        | 403 | 4-chlorophenyl propyl ether        | ND     | 3B         | 78B | di-n-butyl phthalate                | 100 |

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Results by Sample

HEPOM

LMS # 5012-014

CONTINUED FROM PAGE

SAMPLE ID 850111 H20

FRACTION 02A

TEST CODE M625 B

NAME METHOD 525 Base Neutral

Date &amp; Time Collected 01/30/85

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 148 | 412 | 4-bromophenyl phenyl ether  | ND | 88  | 798 | benzo (a) perylene     | 14 |
| 128 | 428 | bis(2-chloroisopropyl)ether | ND | 328 | 808 | fluorene               | 10 |
| 108 | 438 | bis(2-chloroethoxy)methane  | ND | 448 | 818 | phenanthrene           | 16 |
| 348 | 528 | hexachlorobutadiene         | ND | 198 | 828 | dibenz(a,h)anthracene  | 12 |
| 358 | 538 | hexachlorocyclopentadiene   | ND | 378 | 838 | indeno(1,2,3-cd)pyrene | 13 |
| 388 | 548 | isophorone                  | ND | 458 | 848 | pyrene                 | 14 |
| 398 | 558 | naphthalene                 | ND |     |     |                        |    |
| 408 | 568 | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE        | RESULT                     |
|------------------|----------------------------|
| <u>577</u> 591   | d5-nitrobenzene <u>123</u> |
| <u>850</u> 852   | 2 fluorobiphenyl <u>80</u> |
| <u>1447</u> 1553 | d14 terphenyl <u>44</u>    |
| 854              | d10 biphenyl               |

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram

All results reported in this report unless otherwise specified

ND = not detected at EPA detection limit method 625, Federal Register 1/24/84

4 = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute

A = benzo(a)anthracene and chrysene co-elute (high concentration)

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850111 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

B = anthracene and phenanthrene co-elute in high concentrations

EL = detected in reagent blank, background subtraction not performed

J = estimated value, less than method detection limit

CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor

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SAMPLE ID 850111 H2O

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

FRACTION 02A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CHRG # 500200+002

SAMPLE SIZE 1

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/11/86

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs Detected

DATE 17  
RECEIVED 03/01/85

Analytical Serv REFUM  
Results by Sample

LAB # 85-02-004

SAMPLE ID 850111 H20

FRACTION 02A TEST CODE MS 508 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 01/30/86 Category

DATA FILE 850202-0408 DATE EXTRACTED 02/03/86 ANALYST NJI VERIFIED BY LAR  
DATE INJECTED 02/11/86 COMPOUNDS DETECTED 0

| RETEN SCAN | EPA  | COMPOUND  | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|-----------|--------|------------|------|-----------|--------|
| 1P         | 54P  | aldrin    | ND     | 2P         | 102P | alpha BHC | ND     |
| 1P         | 90P  | dieldrin  | ND     | 3P         | 103P | beta BHC  | ND     |
| 5P         | 91P  | chlordane | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4 4'-DDT  | ND     | 5P         | 105P | delta BHC | ND     |
| 9P         | 93P  | 4 4'-DDE  | ND     | 18P        | 106P | PCB-1040  | ND     |
| 9P         | 94P  | 4 4'-DDB  | ND     | 19P        | 107P | PCB-1054  | ND     |
| 11P        | 95P  | 4 4'-DDD  | ND     | 20P        | 108P | PCB-1061  | ND     |
| 11P        | 96P  | 4 4'-DDD  | ND     | 21P        | 109P | PCB-1071  | ND     |
| 11P        | 97P  | 4 4'-DDD  | ND     | 22P        | 110P | PCB-1081  | ND     |
| 11P        | 98P  | 4 4'-DDD  | ND     | 23P        | 111P | PCB-1091  | ND     |
| 11P        | 99P  | 4 4'-DDD  | ND     | 24P        | 112P | PCB-1101  | ND     |
| 11P        | 100P | 4 4'-DDD  | ND     | 25P        | 113P | PCB-1111  | ND     |
| 11P        | 101P | 4 4'-DDD  | ND     | 26P        | 114P | PCB-1121  | ND     |

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SAMPLE ID 850111 H2U

Analytical Serv

Results by Sample

REFID

Lab # 26-12-004

Continued from Above

FRACULON Q2A    Test Code No 512    NAME Pesticides & PWS by G/M/E  
Date & Time Collected 11/30/82    Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625    Federal Register 1/1/84

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SAMPLE ID 00012 H2

DATA FILE 8000000002  
DATA FACTOR 1.000000

DATA FACTOR 1.000000  
DATA FACTOR 1.000000

NETES SCAL: EPA

11A 01A

2A 02A

1A 03A

2A 04A

1A 05A

2A 06A

STANDARD RECOVERIES

SCAL CODE

1425 001

1427 002

1031 003

004

NOTES: 2000 Test 100% FOR

SCAL = SCAL Number

All results reported in

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Analytical Ser.

REPORT

Results by Sample

LAB # 86-02-004

Continued From Page 19

SAMPLE ID 860112 H2O

FRACTION 03A

TEST CODE M525 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

NO - not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
 GL - detected in reagent blank, background subtraction not performed  
 LE - estimated value, less than method detection limit  
 CONC. FACTOR indicates dilution of sample if greater than one (1) Minimum detection  
 limits should be multiplied by conc. factor



AD-A198 442

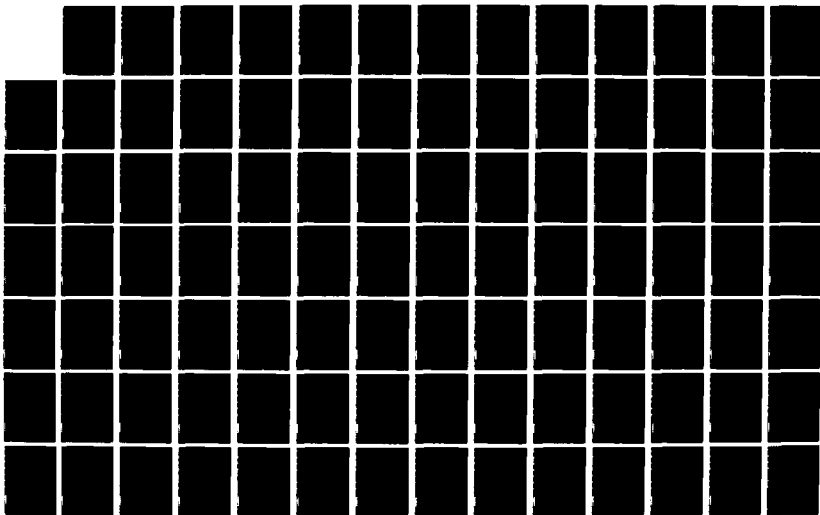
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4881

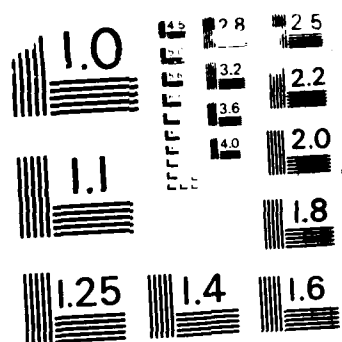
3/7

UNCLASSIFIED

F/G 24/7

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS - 1963-A

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

SAMPLE ID 850112 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

DATA FILE 5CU02004C03  
CORE FACTOR 1

DATE EXTRACTED 02/03/86  
DATE INJECTED 02/11/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 9B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7C         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2,4-triazine              | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850112 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT               |
|-----------|----------------------|
| 572 851   | d5-nitrobenzene 133  |
| 851 852   | 2-fluorobiphenyl 100 |
| 1447 853  | d14-terphenyl 67     |
| 854       | d10-biphenyl         |

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 860112 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

B = Anthracene and phenanthrene co-elute in high concentrations.

SL = Detected in reagent blank; background subtraction not performed.

L = Estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limit; should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 850112 H2O

FRACTION 03A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CHRO # 5U02004C03

SAMPLE SIZE 1

DATE ANALYZED 02/11/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs Detected

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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 850112 H20

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 01/30/86 Category

DATA FILE 5CU02004C03  
CONC. FACTOR

DATE EXTRACTED 02/03/86  
DATE INJECTED 02/11/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 16P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 18P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 19P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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SAMPLE ID 250112 H2O

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 01/30/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 850114 H.O.

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 01/30/86

Category

DATA FILE SC002004C04  
CONC FACTOR 1DATE EXTRACTED 02/03/86  
DATE INJECTED 02/12/86ANALYST  
INSTRUMENTWJL  
5100VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 2A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 4A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 450 | phenol                     | 16     |
| 4A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND          | RESULT |
|-----------|-------------------|--------|
| 455 AS1   | 45-phenol         | 60     |
| 918 AS2   | 2-fluorophenol    | 17     |
| 1024 AS3  | 2,4-dibromophenol | 12     |
| AS4       | 40-phenol         |        |

## NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram

All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850114 H2O

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

ND = not detected at EPA detection limit method 625. (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

DATA FILE SCU02004C04  
DATA PAGE 109 1

|                |          |
|----------------|----------|
| DATE EXTRACTED | 02/03/86 |
| DATE INJECTED  | 02/12/86 |

ANALYST  
INSTRUMENT

5100  
WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| REPORTS SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|--------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 13           | 13  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 43           | 58  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46E          | 88  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B          | 92  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36E          | 128 | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 110          | 188 | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 168          | 208 | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 208          | 258 | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 210          | 268 | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 222          | 278 | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene         | ND     |
| 238          | 308 | 3,3-dichlorobenzidine       | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 278          | 348 | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene       | ND     |
| 288          | 348 | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene       | ND     |
| 318          | 378 | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene                   | ND     |
| 318          | 388 | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 178          | 408 | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene                 | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850114 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 418 | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 428 | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 438 | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 24B | 528 | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 25B | 538 | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 28B | 548 | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 29B | 558 | naphthalene                 | ND |     |     |                        |    |
| 40B | 568 | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 579 891   | d5-nitrobenzene 110 |
| 959 892   | 2-fluorobiphenyl 93 |
| 1499 893  | d14-terphenyl 48    |
| 954       | d10-biphenyl        |

## NOTES AND RECOMMENDATIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in 1992, unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A (anthracene)anthracene and chrysene co-elute high concentrations.

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REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 860114 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

3 = anthracene and phenanthrene co-elute in high concentrations.  
SL = detected in reagent blank, background subtraction not performed.  
J = estimated value, less than method detection limit.  
CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID 250114 H2O

FRACTION 04A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CFR # 51030004C04

SAMPLE SITE 1

DATE ANALYZED 02/12/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCBs Detected

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID 860114 H2O

FRACTION 04A

TEST CODE MS 608

NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 01/30/86

Category

DATA FILE 50002004004

DATE EXTRACTED 02/03/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/12/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 82P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 16P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850114 HED

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

(N) = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID B50109 H2O

FRACTION 05A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

DATA FILE 500020004C05  
CORC FACTOR 1

DATE EXTRACTED 02/03/86  
DATE INJECTED 02/12/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 2A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 457 | phenol                     | 11     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 45A AS1   | d5-phenol            | 97     |
| 31A AS2   | 2-fluorophenol       | 94     |
| 103A AS3  | 2,4,6-tribromophenol | 67     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID 860109 H2O

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/30/86

Category

NU = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

LAB # 86-02-004

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Results by Sample

SAMPLE ID 850109 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 01/30/86

Category

DATA FILE 50U02004C05

DATE EXTRACTED 02/03/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/12/86

INSTRUMENT

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 18         | 18  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 48         | 58  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 468        | 88  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 308        | 98  | hexachlorobenzene           | ND     | 13B 1631   | 66B | bis(2-ethylhexyl)phthalate | 25     |
| 368        | 128 | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 118        | 188 | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 168        | 208 | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 208        | 258 | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 218        | 268 | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 238        | 278 | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 238        | 288 | 3,3-dichlorobenzidine       | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 278        | 328 | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 288        | 338 | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 298        | 348 | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 318        | 358 | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 178        | 408 | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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REPORT

Results by Sample

LAB # 86-02-004

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SAMPLE ID 850109 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2 1800

SUBSTITUTE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 570 351   | d5-nitrobenzene 106 |
| 852 352   | 2-fluorobiphenyl 89 |
| 1452 600  | d14-terphenyl 60    |
| 654       | d10-biphenyl        |

NOTES AND REVISIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
 All results reported in this report unless otherwise specified  
 ND = not detected or EPA detection limit method 625, (Federal Register, 10/26/84)  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute high concentrations

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REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 850109 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/30/86

Category

2 = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID 860109 H2O

FRACTION 05A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 01/30/86

Category

CHRU # 5002004005

SAMPLE SIZE 1

DATE ANALYZED 02/12/86

UNITS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCBs Detected

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REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID 850109 H20

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

DATA FILE 85020004005  
CONC FACTOR

DATE EXTRACTED 02/03/86  
DATE INJECTED 02/12/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 67P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCD-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCE-1250  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID 860109 H2O

FRACTION 05A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/30/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

SAMPLE ID Reagent Blank 625

FRACTION 06A TEST CUDE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 5CR02004C06 DATE EXTRACTED 02/03/86 ANALYST WJL VERIFIED BY LAK  
 CONC. FACTOR 1 DATE INJECTED 02/12/86 INSTRUMENT 5100 COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 37A | 2-nitrophenol           | ND     |            |     |                            |        |

2 193

3 SURrogate RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 125 651   | 45-phenol            | 85     |
| 127 651   | 2-fluorophenol       | 81     |
| 128 653   | 2,4,6-tribromophenol | 43     |
| 129 654   | 43-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 617 results reported in ug/l unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-004

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed  
J = estimated value; less than method detection limit.  
CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/01/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M525 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

| DATA FILE 86020004000 |        | DATE EXTRACTED 02/03/86     |        | ANALYST    |                    | U/L                        |        | VERIFIED BY LAK |   |
|-----------------------|--------|-----------------------------|--------|------------|--------------------|----------------------------|--------|-----------------|---|
| CONC                  | FACTOR | DATE INJECTED               | DATE   | INSTRUMENT | COMPOUNDS DETECTED | 0                          | 5100   | 0               | 0 |
| NPDES SCAN            | EPA    | COMPOUND                    | RESULT | NPDES SCAN | EPA                | COMPOUND                   | RESULT |                 |   |
| 18                    | 10     | acenaphthene                | ND     | 41B        | 61B                | N-nitrosodimethylamine     | ND     |                 |   |
| 48                    | 5B     | benzidine                   | ND     | 43B        | 62B                | N-nitrosodiphenylamine     | ND     |                 |   |
| 408                   | 88     | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B                | N-nitrosodi-n-propylamine  | ND     |                 |   |
| 328                   | 93     | hexachlorobenzene           | ND     | 13B        | 66B                | bis(2-ethylhexyl)phthalate | ND     |                 |   |
| 308                   | 12B    | hexachloroethane            | ND     | 15B        | 67B                | butyl benzyl phthalate     | ND     |                 |   |
| 118                   | 18B    | bis(2-chloroethyl) ether    | ND     | 26B        | 68B                | di-butyl phthalate         | ND     |                 |   |
| 108                   | 20B    | 2-chloronaphthalene         | ND     | 29B        | 69B                | di-n-octyl phthalate       | ND     |                 |   |
| 208                   | 25B    | 1,2,3-trichlorobenzene      | ND     | 24B        | 70B                | diethyl phthalate          | ND     |                 |   |
| 212                   | 26B    | 1,2-dichlorobenzene         | ND     | 25B        | 71B                | dimethyl phthalate         | ND     |                 |   |
| 228                   | 27B    | 1,4-dichlorobenzene         | ND     | 5B         | 72B                | benzo(a)anthracene A       | ND     |                 |   |
| 236                   | 28B    | 5,6-dichlorobenzidine       | ND     | 6B         | 73B                | benzo(a)pyrene             | ND     |                 |   |
| 270                   | 29B    | 2,4-dinitrotoluene          | ND     | 7B         | 74B                | benzo(b)fluoranthene       | ND     |                 |   |
| 280                   | 30B    | 3,5-dinitrotoluene          | ND     | 9B         | 75B                | benzo(k)fluoranthene       | ND     |                 |   |
| 290                   | 31B    | 1,2-diphenylhydrazine       | ND     | 18B        | 76B                | chrysene A                 | ND     |                 |   |
| 318                   | 32B    | fluoranthene                | ND     | 20         | 77B                | acenaphthylene             | ND     |                 |   |
| 372                   | 40B    | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B                | anthracene B               | ND     |                 |   |

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RECEIVED 05-01-85

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION Q6A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 410 | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 420 | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 430 | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 440 | 44B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 450 | 45B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 460 | 46B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 470 | 47B | naphthalene                 | ND |     |     |                        |    |
| 480 | 48B | nitrobenzene                | ND |     |     |                        |    |

**SURROGATE RECOVERIES**

| GC/MS CODE | RESULT              |
|------------|---------------------|
| 570 031    | d5-nitrobenzene 120 |
| 850 033    | 2-fluorobiphenyl 76 |
| 140 033    | d14-terphenyl 32    |
| 150        | d10-biphenyl        |

**QUALITY ASSURANCE DEFINITIONS FOR THIS REPORT**

GC/MS is used to determine retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A ( ) = benzo(a)anthracene and chrysene co-elute (high concentration)

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RECEIVED: 02/01/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/01/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

Client # 58020004C06

SAMPLE SIZE 1

DATE ANALYZED 02/12/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs Detected

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RECEIVED: 02/01/85

Analytical Serv

REPORT

LAB # 86-02-004

Results by Sample

SAMPLE ID Reagent Blank 309

FRACTION 06A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 20000004005

DATE EXTRACTED 02/03/86

ANALYST

VERIFIED BY LAK

CONC FACTOR

DATE INJECTED 02/12/86

WUL

COMPOUNDS DETECTED 0

| INDEX | SCAN | EPA | COMPOUND           | RESULT | NPDES | SCAN | EPA  | COMPOUND  | RESULT |
|-------|------|-----|--------------------|--------|-------|------|------|-----------|--------|
| 1P    | 89P  |     | aldrin             | ND     | 2P    |      | 102P | alpha BHC | ND     |
| 10P   | 90P  |     | dieldrin           | ND     | 3P    |      | 103P | beta BHC  | ND     |
| 5P    | 91P  |     | chlordane          | ND     | 4P    |      | 104P | gamma BHC | ND     |
| 7P    | 92P  |     | 4,4'-DDT           | ND     | 5P    |      | 105P | delta BHC | ND     |
| 8P    | 93P  |     | 4,4'-DDE           | ND     | 18P   |      | 106P | PCB-1242  | ND     |
| 9P    | 94P  |     | 4,4'-DDD           | ND     | 19P   |      | 107P | PCB-1254  | ND     |
| 11P   | 95P  |     | alpha endosulfan   | ND     | 20P   |      | 108P | PCB-1221  | ND     |
| 12P   | 96P  |     | beta endosulfan    | ND     | 21P   |      | 109P | PCB-1232  | ND     |
| 14P   | 97P  |     | endosulfan sulfate | ND     | 22P   |      | 110P | PCB-1248  | ND     |
| 14P   | 98P  |     | endrin             | ND     | 23P   |      | 111P | PCB-1260  | ND     |
| 11P   | 99P  |     | gamma aldehyde     | ND     | 24P   |      | 112P | PCB-1016  | ND     |
| 10P   | 100P |     | heptachlor         | ND     | 25P   |      | 113P | toxaphene | ND     |
| 10P   | 101P |     | heptachlor epoxide | ND     |       |      |      |           |        |

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RECEIVED 02/01/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-004

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 05A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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RECEIVED: 02/01/85

Analytical Serv

REPORT

LAB # 86-02-004

NonReported Work

PRACITION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

018 : DUP\_LNS  
028 : DUP\_LNS  
048 : DUP\_LNS

PAGE 1  
RECEIVED: 02/04/86

Analytical Serv  
02/27/86 17:34:02

LAB # 86-02-015

REPORT Radian  
TO BL 4  
Austin  
ATTEN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

*Carol Scott*  
CERTIFIED BY  
CONTACT CONOVER

\*\*Unknown compound eluting here.  
Second column confirmation performed for EPA 601 on -01,  
-02, -03.

WORK ID water  
TAKEN NR, AM  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 860113  
02 860116  
03 860117

## Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs  
AS GA Arsenic, low level  
BA E Barium, ICPEs  
CD E Cadmium, ICPEs  
CR E Chromium, ICPEs  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons in soil  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

PAGE 2  
RECEIVED: 02/04/86  
Analytical Serv  
RESULTS BY TEST  
REPORT  
LAB # 86-02-015

| TEST CODE               | Sample 01<br>(entered units) | Sample 02<br>(entered units) | Sample 03<br>(entered units) |
|-------------------------|------------------------------|------------------------------|------------------------------|
| AG E<br>ug/ml           | 0.011                        | 0.012                        | 0.008*                       |
| AS GA<br>ug/ml          | <.005                        | <.005                        | <.005                        |
| BA E<br>ug/ml           | 0.097                        | 0.091                        | 0.082                        |
| CD E<br>ug/ml           | <.002                        | <.002                        | <.002                        |
| CR E<br>ug/ml           | 0.029                        | 0.14                         | 0.016*                       |
| DC3020<br>date complete | 02/05/86                     | 02/05/86                     | 02/05/86                     |
| DC6010<br>date complete | 02/11/86                     | 02/11/86                     | 02/11/86                     |
| HC IR<br>ug/g           | <1.0<br>mg/L                 | <1.0<br>mg/L                 | <1.0<br>mg/L                 |
| HG CA<br>ug/ml          | <.0002                       | <.0002                       | <.0002                       |
| ONG IR<br>mg/L          | <1.0                         | <1.0                         | <1.0                         |
| PB GA<br>ug/ml          | 0.006*                       | <.002                        | <.002                        |
| SE GA<br>ug/ml          | <.003                        | <.003                        | <.003e                       |

PAGE 3  
RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-015

Results by Sample

SAMPLE ID 860115

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/03/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/11/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ COMPOUNDS DETECTED 2

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | 1    | Trichloroethene             | 6.63   |
| —    | Bromomethane              | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | 2    | Tetrachloroethylene #       | 43.3   |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| —    | Chloroform                | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| —    | Bromodichloromethane      | ND     |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-015

Continued From Above

SAMPLE ID 860115

FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/03/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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RECEIVED: 02/04/86

Analytical Serv  
Results by Sample

LAB # 86-02-015

SAMPLE ID 860115

FRACTION 01C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/03/86 Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/03/86 ANALYST \_\_\_\_\_ MCL VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ 4 COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 5.30 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

RECEIVED: 02/04/86

Results by Sample

SAMPLE ID 860116

FRACTION 02A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/03/86

Category

DATE INJECTED 02/11/86

VERIFIED BY MCL

ANALYST

INSTRUMENT

SCAN

COMPOUND

RESULT

DATA FILE

CONC. FACTOR

RP

COMPOUNDS DETECTED 3

SCAN

COMPOUND

RESULT

Trichloroethene

1274

Dibromochloromethane

\*

ND

1,1,2-Trichloroethane

\*

ND

cis-1,3-Dichloropropene

\*

ND

2-Chloroethylvinyl Ether

\*

ND

Bromoform

ND

1,1,2,2-Tetrachloroethane

#

ND

Tetrachloroethylene

#

22.8

Chlorobenzene

ND

1,3-Dichlorobenzene

ND

1,2-Dichlorobenzene

ND

1,4-Dichlorobenzene

ND

Chloroform

ND

1,2-Dichloroethane

ND

1,1,1-Trichloroethane

ND

Carbon Tetrachloride

ND

Bromodichloromethane

ND

1,2-Dichloropropane

ND

trans-1,3-Dichloropropene

ND

PAGE 7

RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-015

Continued From Above

SAMPLE ID 860116

FRACTION 02A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/03/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



PAGE 8  
RECEIVED: 02/04/86

Analytical Serv  
Results by Sample

LAB # 86-02-015

SAMPLE ID 860116

FRACTION 02C

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/03/86

Category

DATA FILE \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_

DATE INJECTED 02/03/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 7.56 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/04/86

Analytical Serv  
Results by Sample

LAB # 86-02-015

SAMPLE ID 860117

FRACTION 03A  
Date & Time Collected 02/03/86

TEST CODE GC 601 NAME EPA Method 601/GC  
Category

| DATA FILE    | Q                         | DATE INJECTED | 02/11/86 | ANALYST                     | RP     | VERIFIED BY        | MCL |
|--------------|---------------------------|---------------|----------|-----------------------------|--------|--------------------|-----|
| CONC. FACTOR |                           |               |          | INSTRUMENT                  | a      | COMPOUNDS DETECTED | 2   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                    | RESULT |                    |     |
|              | Chloromethane             | ND            | 1        | Trichloroethene             | 174    |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane *      | ND     |                    |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane *     | ND     |                    |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene *   | ND     |                    |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether    | ND     |                    |     |
|              | Trichlorofluoromethane    | ND            |          | Bromoform                   | ND     |                    |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane # | ND     |                    |     |
|              | 1,1-Dichloroethane        | ND            | 2        | Tetrachloroethylene #       | 12.5   |                    |     |
|              | trans-1,2-Dichloroethene  | ND            |          | Chlorobenzene               | ND     |                    |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene         | ND     |                    |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene         | ND     |                    |     |
|              | 1,1,1-Trichloroethane     | ND            |          | 1,4-Dichlorobenzene         | ND     |                    |     |
|              | Carbon Tetrachloride      | ND            |          |                             |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                             |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                             |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                             |        |                    |     |

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-015

Continued From Above

SAMPLE ID 860117

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/03/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-015

Results by Sample

SAMPLE ID 860117

FRACTION 03C

TEST CODE GC 602

NAME EPA Method 602/GC

Date &amp; Time Collected 02/03/86

Category

DATA FILE  
CONC. FACTOR

D

DATE INJECTED 02/03/86

ANALYST  
INSTRUMENT

MCL

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 1.44 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-015

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |     |   |        |     |   |        |
|-----|---|--------|-----|---|--------|-----|---|--------|
| 01B | : | DUP601 | 01D | : | DUP602 | 01F | : | DUP_NS |
| 02B | : | DUP601 | 02D | : | DUP602 | 02F | : | DUP_NS |
| 03B | : | DUP601 | 03D | : | DUP602 | 03F | : | DUP_NS |

PAGE 1  
RECEIVED: 02/04/86  
Analytical Serv  
REPORT  
02/26/86 19:08:05  
LAB # 86-02-016

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766

*Larry French*  
CERTIFIED BY

ATTEN

ATTEN  
PHONE (512) 434-4797

CONTACT FRENCH

CLIENT PLANT 4  
COMPANY General Dynamics  
FACILITY GEHL Plant 4, Bldg 4  
Austin, Texas

SAMPLES 6

WORK ID Fort Worth Plant 4  
TAKEN 1/30/86 - 2/3/86  
TRANS Fed Ex 321175260  
TYPE H2O  
P.O. # 212-027-27-40  
INVOICE under separate cover

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

- 01 860112 H2O
- 02 860113 H2O
- 03 860115 H2O
- 04 860116 H2O
- 05 860117 H2O
- 06 Duplicate Analysis 86013
- 06 Matrix Spike 86013
- 06 Reagent Blank

Analytical Serv TEST CODES and NAMES used on this report

- EX 625 Extraction only - 625 BN/A
- M625 A Method 625 Acid Compounds
- M625 B Method 625 Base/Neutrals
- MSNS S GCMS Characterization-ABN
- MS 608 Pesticides & PCBs by GC/MS

PAGE 2

RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-016

RESULTS BY TEST

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| EX_625        | 02/04/86        | 02/04/86        | 02/04/86        | 02/04/86        | 02/04/86        |
| date complete |                 |                 |                 |                 |                 |

| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| EX_625        | 02/04/86        |
| date complete | 02/04/86        |
|               | 02/04/86        |

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID 860112 H20

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/31/86

Category

DATA FILE 5CU02016C01

DATE EXTRACTED 02/04/86

ANALYST

INSTRUMENT

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

MM

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 454 AS1   | d5-phenol            | 54     |
| 342 AS2   | 2-fluorophenol       | 60     |
| 1082 AS3  | 2,4,6-tribromophenol | 39     |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.



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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860112 H2O

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 01/31/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860112 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 01/31/86

Category

| DATA FILE 5CU02016C01 |      |     | DATE EXTRACTED 02/04/86     |        | ANALYST    |      | MM   |                            | VERIFIED BY LAK      |  |
|-----------------------|------|-----|-----------------------------|--------|------------|------|------|----------------------------|----------------------|--|
| CONC. FACTOR 1        |      |     | DATE INJECTED 02/14/86      |        | INSTRUMENT |      | 5100 |                            | COMPOUNDS DETECTED 0 |  |
| NPDES                 | SCAN | EPA | COMPOUND                    | RESULT | NPDES      | SCAN | EPA  | COMPOUND                   | RESULT               |  |
| 1B                    |      | 1B  | acenaphthene                | ND     | 41B        |      | 61B  | N-nitrosodimethylamine     | ND                   |  |
| 4B                    |      | 5B  | benzidine                   | ND     | 43B        |      | 62B  | N-nitrosodiphenylamine     | ND                   |  |
| 46B                   |      | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        |      | 63B  | N-nitrosodi-n-propylamine  | ND                   |  |
| 33B                   |      | 9B  | hexachlorobenzene           | ND     | 13B        |      | 66B  | bis(2-ethylhexyl)phthalate | ND                   |  |
| 36B                   |      | 12B | hexachloroethane            | ND     | 15B        |      | 67B  | butyl benzyl phthalate     | ND                   |  |
| 11B                   |      | 18B | bis(2-chloroethyl)ether     | ND     | 26B        |      | 68B  | di-butyl phthalate         | ND                   |  |
| 16B                   |      | 20B | 2-chloronaphthalene         | ND     | 29B        |      | 69B  | di-n-octyl phthalate       | ND                   |  |
| 20B                   |      | 25B | 1,2-dichlorobenzene         | ND     | 24B        |      | 70B  | diethyl phthalate          | ND                   |  |
| 21B                   |      | 26B | 1,3-dichlorobenzene         | ND     | 25B        |      | 71B  | dimethyl phthalate         | ND                   |  |
| 22B                   |      | 27B | 1,4-dichlorobenzene         | ND     | 5B         |      | 72B  | benzo(a)anthracene A       | ND                   |  |
| 23B                   |      | 28B | 3,3'dichlorobenzidine       | ND     | 6B         |      | 73B  | benzo(a)pyrene             | ND                   |  |
| 27B                   |      | 35B | 2,4-dinitrotoluene          | ND     | 7B         |      | 74B  | benzo(b)fluoranthene *     | ND                   |  |
| 28B                   |      | 36B | 2,6-dinitrotoluene          | ND     | 9B         |      | 75B  | benzo(k)fluoranthene *     | ND                   |  |
| 29B                   |      | 37B | 1,2-diphenylhydrazine       | ND     | 18B        |      | 76B  | chrysene A                 | ND                   |  |
| 31B                   |      | 39B | fluoranthene                | ND     | 2B         |      | 77B  | acenaphthylene             | ND                   |  |
| 17B                   |      | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         |      | 78B  | anthracene B               | ND                   |  |

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Results by Sample  
REPORT  
LAB # 86-02-016  
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SAMPLE ID 860112 H20  
FRACTION 01A  
Date & Time Collected 01/31/86  
TEST CODE M625 B  
NAME Method 625 Base/Neutrals  
Category \_\_\_\_\_

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

**SURROGATE RECOVERIES**

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>37B</u> BS1  | d5-nitrobenzene <u>38</u>  |
| <u>852</u> BS2  | 2-fluorobiphenyl <u>41</u> |
| <u>144B</u> BS3 | d14-terphenyl <u>31</u>    |
| BS4             | d10-biphenyl _____         |

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860112 H2O

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

LAB # 86-02-016

FRACTION 01A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 01/31/86

Category

CHRO # 3CU02016C1

SAMPLE SIZE 1

DATE ANALYZED 02/14/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCB's Detected

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Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID 860112 H2O

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/31/86

Category

DATA FILE 3CU02016C01

DATE EXTRACTED 02/04/86

ANALYST MM

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/14/86

MM

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860112 H2O

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/31/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/31/86

Category

DATA FILE 5CU02016C02

DATE EXTRACTED 02/04/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

INSTRUMENT

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

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SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 454 AS1   | d3-phenol            | 61     |
| 343 AS2   | 2-fluorophenol       | 64     |
| 1083 AS3  | 2,4,6-tribromophenol | 65     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.



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Results by Sample

REPORT

LAB # 86-02-016

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SAMPLE ID 860113 H2O

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 01/31/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 01/31/86

Category

| DATA FILE 5CU02016C02 |     | DATE EXTRACTED 02/04/86     |        | ANALYST    |      | MM   |                            | VERIFIED BY LAK      |  |
|-----------------------|-----|-----------------------------|--------|------------|------|------|----------------------------|----------------------|--|
| CONC. FACTOR 1        |     | DATE INJECTED 02/14/86      |        | INSTRUMENT |      | 5100 |                            | COMPOUNDS DETECTED 2 |  |
| NPDES SCAN            | EPA | COMPOUND                    | RESULT | NPDES      | SCAN | EPA  | COMPOUND                   | RESULT               |  |
| 1B                    | 1B  | acenaphthene                | ND     | 41B        | 61B  |      | N-nitrosodimethylamine     | ND                   |  |
| 4B                    | 5B  | benzidine                   | ND     | 43B        | 62B  |      | N-nitrosodiphenylamine     | ND                   |  |
| 46B                   | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B  |      | N-nitrosodi-n-propylamine  | ND                   |  |
| 33B                   | 9B  | hexachlorobenzene           | ND     | 13B 163Q   | 66B  |      | bis(2-ethylhexyl)phthalate | 3                    |  |
| 36B                   | 12B | hexachloroethane            | ND     | 15B        | 67B  |      | butyl benzyl phthalate     | ND                   |  |
| 11B                   | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1293   | 68B  |      | di-butyl phthalate         | 2 BL                 |  |
| 16B                   | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B  |      | di-n-octyl phthalate       | ND                   |  |
| 20B                   | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B  |      | diethyl phthalate          | ND                   |  |
| 21B                   | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B  |      | dimethyl phthalate         | ND                   |  |
| 22B                   | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B  |      | benzo(a)anthracene A       | ND                   |  |
| 23B                   | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B  |      | benzo(a)pyrene             | ND                   |  |
| 27B                   | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B  |      | benzo(b)fluoranthene *     | ND                   |  |
| 28B                   | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B  |      | benzo(k)fluoranthene *     | ND                   |  |
| 29B                   | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B  |      | chrysene A                 | ND                   |  |
| 31B                   | 39B | fluoranthene                | ND     | 2B         | 77B  |      | acenaphthylene             | ND                   |  |
| 17B                   | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B  |      | anthracene B               | ND                   |  |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

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SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>579</u> BS1  | d5-nitrobenzene <u>75</u>  |
| <u>852</u> BS2  | 2-fluorobiphenyl <u>77</u> |
| <u>1449</u> BS3 | d14-terphenyl <u>80</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Results by Sample

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SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 01/31/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-016

SAMPLE ID 860113 H2O

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 01/31/86 Category

CHRD # 5CU02016C2  
SAMPLE SIZE 1

DATE ANALYZED 02/14/86 UNITS ug/l VERIFIED BY LAK

| SCAN | COMPOUND | RESULT | CONF<br>LEVEL | REF<br>CMPD |
|------|----------|--------|---------------|-------------|
|------|----------|--------|---------------|-------------|

No PCB's Detected

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Analytical Serv  
Results by Sample

LAB # 86-02-016

SAMPLE ID 860113 H20  
FRACTION 02A  
Date & Time Collected 01/31/86  
TEST CODE MS 608  
NAME Pesticides & PCBs by GC/MS  
Category

DATA FILE 5CU02016C02  
CONC. FACTOR  
DATE EXTRACTED 02/04/86  
DATE INJECTED 02/14/86  
ANALYST  
MM  
VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

Results by Sample

LAB # 86-02-016

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SAMPLE ID 860113 H20

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 01/31/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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 SAMPLE ID 860115 H2O  
 Analytical Serv REPORT  
 Results by Sample  
 LAB # 86-02-016  
 FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds  
 Date & Time Collected 02/03/86 Category           

DATA FILE 5CU02016C03 DATE EXTRACTED 02/04/86 ANALYST            VERIFIED BY LAK  
 CONC. FACTOR 1 DATE INJECTED 02/14/86 INSTRUMENT 3100 MM COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

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## SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT    |
|-----------------|----------------------|-----------|
| <u>456</u> AS1  | d5-phenol            | <u>70</u> |
| <u>348</u> AS2  | 2-fluorophenol       | <u>77</u> |
| <u>1083</u> AS3 | 2,4,6-tribromophenol | <u>48</u> |
| AS4             | d3-phenol            |           |

NOTES AND DEFINITIONS FOR THIS REPORT.  
 SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.



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REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H2O

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

LAB # 86-02-016

SAMPLE ID 860115 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

DATA FILE 5CU02016C03

DATE EXTRACTED 02/04/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

INSTRUMENT

5100

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 163Q   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H2O

FRACTION Q3A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>579</u> BS1  | d5-nitrobenzene <u>80</u>  |
| <u>852</u> BS2  | 2-fluorobiphenyl <u>91</u> |
| <u>1448</u> BS3 | d14-terphenyl <u>48</u>    |
| BS4             | d10-biphenyl               |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H2G

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-016

SAMPLE ID 860115 H20

FRACTION 03A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/03/86 Category

CHRD # 5CU02016C3  
SAMPLE SIZE 1

VERIFIED BY LAK

DATE ANALYZED 02/14/86 UNITS ug/l

| SCAN | COMPOUND | RESULT | CONF<br>LEVEL | REF<br>CMPD |
|------|----------|--------|---------------|-------------|
|------|----------|--------|---------------|-------------|

No PCB's Detected

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860115 H20

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category

DATA FILE 3CU02016C03

DATE EXTRACTED 02/04/86

ANALYST MM

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/14/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860115 H20

FRACTION Q3A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860116 H2O

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category

DATA FILE 5CU02016C04

DATE EXTRACTED 02/04/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

ANALYST INSTRUMENT

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 45B 65A | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 454 AS1   | d5-phenol            | 70     |
| 341 AS2   | 2-fluorophenol       | 76     |
| 1082 AS3  | 2,4,6-tribromophenol | 60     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.



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REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

DATA FILE 5CU0201604

DATE EXTRACTED 02/04/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

INSTRUMENT

5100

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 57B BS1   | d5-nitrobenzene 80  |
| 852 BS2   | 2-fluorobiphenyl 89 |
| 1449 BS3  | d14-terphenyl 60    |
| BS4       | d10-biphenyl        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860116 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860116 H20

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/03/86 Category

CHRO # 5CU02016C4

SAMPLE SIZE 1

DATE ANALYZED 02/14/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCB's Detected

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Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID B60116 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category

DATA FILE 5CU02016C04

DATE EXTRACTED 02/04/86

ANALYST

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

CONC. FACTOR

DATE INJECTED 02/14/86

MM

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860116 H20

FRACTION Q4A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860117 H2O

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 02/03/86

Category

DATA FILE 5CU02016C05

DATE EXTRACTED 02/04/86

ANALYST

LAK

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/14/86

INSTRUMENT

5100

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 457 | 65A                        | phenol |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            | 2      |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 455 AS1   | d5-phenol            | 66     |
| 344 AS2   | 2-fluorophenol       | 73     |
| 1083 AS3  | 2,4,6-tribromophenol | 40     |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H2O

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/03/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID 860117 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

DATA FILE SCU02016003

DATE EXTRACTED 02/04/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/14/86

INSTRUMENT

5100

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,b)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 580 BS1   | d5-nitrobenzene 7B  |
| 853 BS2   | 2-fluorobiphenyl 82 |
| 1450 BS3  | d14-terphenyl 62    |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
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 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/03/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID 860117 H20

FRACTION 05A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/03/86

Category

CHRD # 5CU02016C3

SAMPLE SIZE 1

DATE ANALYZED 02/14/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCB's Detected

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID 860117 H20

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category

DATA FILE 5CU02016C03

DATE EXTRACTED 02/04/86

ANALYST

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

CONC. FACTOR

DATE INJECTED 02/14/86

MM

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID 860117 H20

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/03/86

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

DATA FILE 2CD02016C06

DATE EXTRACTED 02/04/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR 2

DATE INJECTED 02/16/86

INSTRUMENT F2

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 452 65A | phenol                     | 4      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT            |
|-----------------|----------------------|-------------------|
| <u>458</u> AS1  | d5-phenol            | <u>76</u>         |
| <u>336</u> AS2  | 2-fluorophenol       | <u>115</u>        |
| <u>1075</u> AS3 | 2,4,6-tribromophenol | <u>103</u>        |
| AS4             | d3-phenol            | <u>          </u> |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.



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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date &amp; Time Collected not specified

Category

DATA FILE 2CD02016C06

DATE EXTRACTED 02/04/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 2

DATE INJECTED 02/16/86

INSTRUMENT

F2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1646   | 66B | bis(2-ethylhexyl)phthalate | 3      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1305   | 68B | di-butyl phthalate         | B BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 58B BS1   | d5-nitrobenzene 94  |
| 86B BS2   | 2-fluorobiphenyl 75 |
| 146B BS3  | d14-terphenyl 106   |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected not specified Category

CHRO # 2CDO2016C6  
SAMPLE SIZE 2

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/16/86

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCB's Detected

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RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B TEST CODE MS 608 NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected not specified

Category

DATA FILE 2CD02016C06

DATE EXTRACTED 02/04/86

ANALYST MM

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/16/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Duplicate Analysis 86013

FRACTION 06B

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

DATA FILE 5CM02016C06

DATE EXTRACTED 02/03/86

DATE INJECTED 02/18/86

ANALYST           

INSTRUMENT           

MM           

5100           

VERIFIED BY LAK

COMPOUNDS DETECTED 11

| NPDES SCAN     | EPA | COMPOUND                | RESULT    | NPDES SCAN     | EPA | COMPOUND                   | RESULT    |
|----------------|-----|-------------------------|-----------|----------------|-----|----------------------------|-----------|
| 11A <u>841</u> | 21A | 2,4,6-trichlorophenol   | <u>41</u> | 7A <u>979</u>  | 58A | 4-nitrophenol              | <u>38</u> |
| 8A <u>771</u>  | 22A | 4-chloro-3-methylphenol | <u>28</u> | 5A <u>969</u>  | 59A | 2,4-dinitrophenol          | <u>52</u> |
| 1A <u>478</u>  | 24A | 2-chlorophenol          | <u>57</u> | 4A <u>1057</u> | 60A | 2-methyl-4,6-dinitrophenol | <u>74</u> |
| 2A <u>662</u>  | 31A | 2,4-dichlorophenol      | <u>62</u> | 9A <u>1172</u> | 64A | pentachlorophenol          | <u>85</u> |
| 3A <u>636</u>  | 34A | 2,4-dimethylphenol      | <u>56</u> | 10A <u>459</u> | 65A | phenol                     | <u>54</u> |
| 6A <u>630</u>  | 57A | 2-nitrophenol           | <u>64</u> |                |     |                            |           |

SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT            |
|-----------------|----------------------|-------------------|
| <u>457</u> AS1  | d5-phenol            | <u>56</u>         |
| <u>349</u> AS2  | 2-fluorophenol       | <u>226</u>        |
| <u>1084</u> AS3 | 2,4,6-tribromophenol | <u>43</u>         |
| AS4             | d3-phenol            | <u>          </u> |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in% Recov. unless otherwise specified.



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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Matrix Spike 86013

FRACTION 06A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected not specified Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

| DATA FILE 3CM02016C06 |      | DATE EXTRACTED 02/03/86 |                             | ANALYST    |      | MM                         |        | VERIFIED BY LAK       |  |
|-----------------------|------|-------------------------|-----------------------------|------------|------|----------------------------|--------|-----------------------|--|
| CONC. FACTOR 1        |      | DATE INJECTED 02/18/86  |                             | INSTRUMENT |      | 3100                       |        | COMPOUNDS DETECTED 44 |  |
| NPDES SCAN            | EPA  | COMPOUND                | RESULT                      | NPDES SCAN | EPA  | COMPOUND                   | RESULT |                       |  |
| 1B                    | 964  | 1B                      | acenaphthene                | 41B        | 61B  | N-nitrosodimethylamine     | ND     |                       |  |
| 4B                    | 1413 | 5B                      | benzidine                   | 43B        | 1063 | N-nitrosodiphenylamine     | 85     |                       |  |
| 46B                   | 679  | 8B                      | 1,2,4-trichlorobenzene      | 42B        | 563  | N-nitrosodi-n-propylamine  | 34     |                       |  |
| 33B                   | 1145 | 9B                      | hexachlorobenzene           | 13B        | 1632 | bis(2-ethylhexyl)phthalate | 68     |                       |  |
| 36B                   | 574  | 12B                     | hexachloroethane            | 15B        | 1533 | butyl benzyl phthalate     | 32     |                       |  |
| 11B                   | 470  | 18B                     | bis(2-chloroethyl)ether     | 26B        | 1295 | di-butyl phthalate         | 93     |                       |  |
| 16B                   | 858  | 20B                     | 2-chloronaphthalene         | 29B        | 1741 | di-n-octyl phthalate       | 41     |                       |  |
| 20B                   | 530  | 25B                     | 1,2-dichlorobenzene         | 24B        | 1035 | diethyl phthalate          | 43     |                       |  |
| 21B                   | 498  | 26B                     | 1,3-dichlorobenzene         | 25B        | 923  | dimethyl phthalate         | 50     |                       |  |
| 22B                   | 505  | 27B                     | 1,4-dichlorobenzene         | 5B         | 1618 | benzo(a)anthracene A       | 98     |                       |  |
| 23B                   | 1614 | 28B                     | 3,3'-dichlorobenzidine      | 6B         | 1907 | benzo(a)pyrene             | 88     |                       |  |
| 27B                   | 973  | 35B                     | 2,4-dinitrotoluene          | 7B         | 1826 | benzo(b)fluoranthene *     | 47     |                       |  |
| 28B                   | 932  | 36B                     | 2,6-dinitrotoluene          | 9B         | 1832 | benzo(k)fluoranthene *     | 53     |                       |  |
| 29B                   |      | 37B                     | 1,2-diphenylhydrazine       | 18B        | 1624 | chrysene A                 | 87     |                       |  |
| 31B                   | 1337 | 39B                     | fluoranthene                | 2B         | 934  | acenaphthylene             | 62     |                       |  |
| 17B                   | 1044 | 40B                     | 4-chlorophenyl phenyl ether | 3B         | 1203 | anthracene B               | 106    |                       |  |

**NO-A198 442**

INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4801

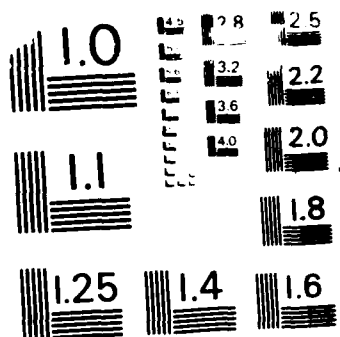
47

**UNCLASSIFIED**

**F/G 24/7**

ML

[illegible]



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

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RECEIVED: 02/04/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

Continued From Above

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |             |     |                             |           |     |             |     |                        |            |
|-----|-------------|-----|-----------------------------|-----------|-----|-------------|-----|------------------------|------------|
| 148 | <u>1121</u> | 41B | 4-bromophenyl phenyl ether  | <u>91</u> | 88  | <u>3283</u> | 79B | benzo(ghi)perylene     | <u>31</u>  |
| 128 | <u>343</u>  | 42B | bis(2-chloroisopropyl)ether | <u>46</u> | 328 | <u>1044</u> | 80B | fluorene               | <u>31</u>  |
| 108 | <u>631</u>  | 43B | bis(2-chloroethoxy)methane  | <u>71</u> | 448 | <u>1196</u> | 81B | phenanthrene B         | <u>100</u> |
| 348 | <u>717</u>  | 52B | hexachlorobutadiene         | <u>94</u> | 198 | <u>2288</u> | 82B | dibenzo(a,h)anthracene | <u>26</u>  |
| 358 | <u>829</u>  | 53B | hexachlorocyclopentadiene   | <u>1</u>  | 378 | <u>2281</u> | 83B | indeno(1,2,3-cd)pyrene | <u>26</u>  |
| 388 | <u>618</u>  | 54B | isophorone                  | <u>80</u> | 458 | <u>1423</u> | 84B | pyrene                 | <u>83</u>  |
| 398 | <u>688</u>  | 55B | naphthalene                 | <u>91</u> |     |             |     |                        |            |
| 408 | <u>584</u>  | 56B | nitrobenzene                | <u>73</u> |     |             |     |                        |            |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>581</u> BS1  | d5-nitrobenzene <u>39</u>  |
| <u>854</u> BS2  | 2-fluorobiphenyl <u>22</u> |
| <u>1450</u> BS3 | d14-terphenyl <u>34</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in % Recovery, unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Matrix Spike 86013

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category \_\_\_\_\_

B = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/04/86

Analytical Serv

REPORT

LAB # 86-02-016

Results by Sample

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

DATA FILE 2CB02016C06  
CONC. FACTOR 1

DATE EXTRACTED 02/04/86  
DATE INJECTED 02/16/86

ANALYST WJL  
INSTRUMENT F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT    | NPDES SCAN | EPA | COMPOUND                   | RESULT    |
|------------|-----|-------------------------|-----------|------------|-----|----------------------------|-----------|
| 11A        | 21A | 2,4,6-trichlorophenol   | <u>ND</u> | 7A         | 58A | 4-nitrophenol              | <u>ND</u> |
| 8A         | 22A | 4-chloro-3-methylphenol | <u>ND</u> | 5A         | 59A | 2,4-dinitrophenol          | <u>ND</u> |
| 1A         | 24A | 2-chlorophenol          | <u>ND</u> | 4A         | 60A | 2-methyl-4,6-dinitrophenol | <u>ND</u> |
| 2A         | 31A | 2,4-dichlorophenol      | <u>ND</u> | 9A         | 64A | pentachlorophenol          | <u>ND</u> |
| 3A         | 34A | 2,4-dimethylphenol      | <u>ND</u> | 10A        | 65A | phenol                     | <u>ND</u> |
| 6A         | 57A | 2-nitrophenol           | <u>ND</u> |            |     |                            |           |

## SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT            |
|-----------------|----------------------|-------------------|
| <u>465</u> AS1  | d3-phenol            | <u>63</u>         |
| <u>351</u> AS2  | 2-fluorophenol       | <u>79</u>         |
| <u>1076</u> AS3 | 2,4,6-tribromophenol | <u>78</u>         |
| AS4             | d3-phenol            | <u>          </u> |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/04/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-016

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

DATA FILE 2CBO2016C06  
CONC. FACTOR 1

DATE EXTRACTED 02/04/86  
DATE INJECTED 02/16/86

ANALYST             
INSTRUMENT 1

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 130Z   | 68B | di-butyl phthalate         | 2      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

**SURROGATE RECOVERIES**

| SCAN CODE       | RESULT                         |
|-----------------|--------------------------------|
| <u>392</u> BS1  | d5-nitrobenzene <u>50</u>      |
| <u>866</u> BS2  | 2-fluorobiphenyl <u>52</u>     |
| <u>1463</u> BS3 | d14-terphenyl <u>37</u>        |
| BS4             | d10-biphenyl <u>          </u> |

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

FRACTION 06C TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified Category

CHRD # 2C802016C6

DATE ANALYZED 02/16/86

UNITS ug/l

VERIFIED BY LAK

CONF REF

LEVEL CMPD

COMPOUND

SCAN

RESULT

No PCB's Detected

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

SAMPLE ID Reagent Blank

FRACTION 06C TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected not specified Category

DATA FILE 2CBO2016CQ6  
CONC. FACTOR

DATE EXTRACTED 02/04/86  
DATE INJECTED 02/14/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

**KRADIANT**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-016

Conti

PAGE 1

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Analytical Serv

REPORT

LAB # 86-02-019 ✓

02/27/86 17:39:51

REPORT Radian

TO BL 4

Austin

ATTEN Larry French

CLIENT PLANT 4

SAMPLES 3

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

WORK ID groundwater

TAKEN NR. AM

TRANS Fed Ex

TYPE

P.O. # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 Mopac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CONTACT CONOVER

CERTIFIED BY



\*\*Unknown compound eluting here.

2nd column confirmation on EPA 601 for -04. Many unknown compounds in high quantities eluting on EPA 602 for -04.

## Footnotes and Comments

\* Indicates a value less than 3 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

01 B60118  
02 B60119  
03 B60120  
04 B60121  
05 B60123

## Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs  
AS GA Arsenic, low level  
BA E Barium, ICPEs  
CD E Cadmium, ICPEs  
CR E Chromium, ICPEs  
DC3020 Digestion by Method 3020  
DC6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons in soil  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

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Analytical Serv REPORT

LAB # 86-02-019

RECEIVED: 02/05/86

RESULTS BY TEST

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| AG E          |                 |                 | 0.007*          | 0.012           |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| AS GA         |                 |                 | <.005           | <.005           |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| BA E          |                 |                 | 0.082           | 0.13            |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| CD E          |                 |                 | <.002           | <.002           |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| CR E          |                 |                 | 0.006*          | 0.33            |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| DG3020        |                 |                 | 02/05/86        | 02/05/86        |                 |
| date complete |                 |                 |                 |                 |                 |
| DG6010        |                 |                 | 02/11/86        | 02/11/86        |                 |
| date complete |                 |                 |                 |                 |                 |
| HC IR         |                 |                 | <1.0            | <1.0            | <1.0            |
| ug/g          |                 |                 | mg/L            | mg/L            | mg/L            |
| HG CA         |                 |                 | <.0002          | <.0002          |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| ONG IR        |                 |                 | <1.0            | <1.0            | <1.0            |
| mg/L          |                 |                 |                 |                 |                 |
| PB GA         |                 |                 | <.002e          | 0.004*          |                 |
| ug/ml         |                 |                 |                 |                 |                 |
| SE GA         |                 |                 | 0.003*          | <.002e          |                 |
| ug/ml         |                 |                 |                 |                 |                 |



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Analytical Serv

REPORT

LAB # 86-02-019

Results by Sample

SAMPLE ID 860120

FRACTION 03C

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/04/86

Category

| DATA FILE    | Q                         | DATE INJECTED | 02/06/86 | ANALYST                   | RP     | VERIFIED BY        | MCL |
|--------------|---------------------------|---------------|----------|---------------------------|--------|--------------------|-----|
| CONC. FACTOR |                           |               |          | INSTRUMENT                | g      | COMPOUNDS DETECTED | Q   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                  | RESULT |                    |     |
|              | Chloromethane             | ND            |          | Trichloroethene           | ND     |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane      | *      | ND                 |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane     | *      | ND                 |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene   | *      | ND                 |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether  | ND     |                    |     |
|              | Trichlorofluoromethane    | ND            |          | Bromoform                 | ND     |                    |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane | #      | ND                 |     |
|              | 1,1-Dichloroethane        | ND            |          | Tetrachloroethylene       | #      | ND                 |     |
|              | trans-1,2-Dichloroethene  | ND            |          | Chlorobenzene             | ND     |                    |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene       | ND     |                    |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene       | ND     |                    |     |
|              | 1,1,1-Trichloroethane     | ND            |          | 1,4-Dichlorobenzene       | ND     |                    |     |
|              | Carbon Tetrachloride      | ND            |          |                           |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                           |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                           |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                           |        |                    |     |

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SAMPLE ID B60120  
Analytical Serv Results by Sample REPORT  
LAB # 86-02-019 Continued From Above  
FRACTION Q3C TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/04/86 Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-019

SAMPLE ID 860120

FRACTION 03E TEST CODE GC 602  
Date & Time Collected 02/04/86

NAME EPA Method 602/GC  
Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/03/86 ANALYST \_\_\_\_\_ MCL VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 0.64 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   | —    |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-019

SAMPLE ID 860121

FRACTION 04C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/04/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 2

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | 2    | Trichloroethene             | 18688  |
| —    | Bromomethane              | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| 1    | trans-1,2-Dichloroethene  | 1288** | —    | Chlorobenzene               | ND     |
| —    | Chloroform                | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| —    | Bromodichloromethane      | ND     |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-019

Continued From Above

SAMPLE ID 860121

FRACTION 04C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/04/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-019

Results by Sample

SAMPLE ID 860121

FRACTION 04E

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/04/86

Category

DATA FILE        D DATE INJECTED 02/03/86 ANALYST        RP VERIFIED BY MCL  
CONC. FACTOR        INSTRUMENT        d COMPOUNDS DETECTED   0  

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in        ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-019

SAMPLE ID 860123

FRACTION 05C TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/04/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED \_\_\_\_\_

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | —    | Trichloroethene             | ND     |
| —    | Bromomethane              | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| —    | Chloroform                | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| —    | Bromodichloromethane      | ND     |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-019

Continued From Above

SAMPLE ID 860123

FRACTION 05C

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/04/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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Analytical Serv

REPORT

LAB # 86-02-019

Results by Sample

SAMPLE ID 860123

FRACTION 05E TEST CODE GC 602 NAME EPA Method 602/GC

Date &amp; Time Collected 02/04/86

Category

DATA FILE        D DATE INJECTED 02/05/86 ANALYST        RP VERIFIED BY MCL  
CONC. FACTOR        INSTRUMENT        d COMPOUNDS DETECTED   0  

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

2 287

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in        ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

**MACADAMIAN  
CORPORATION**

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Analytical Serv

REPORT

LAB # 86-02-019

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |     |   |        |     |   |        |
|-----|---|--------|-----|---|--------|-----|---|--------|
| 03D | : | DUP601 | 03F | : | DUP602 | 03H | : | DUP_NS |
| 04D | : | DUP601 | 04F | : | DUP602 | 04H | : | DUP_NS |
| 05D | : | DUP601 | 05F | : | DUP602 |     | : |        |

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Analytical Serv

REPORT

LAB # 86-02-030

02/26/86 17:57:57

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

ATTEN N. Robinson

CLIENT PLANT 4 SAMPLES 6  
COMPANY General Dynamics  
FACILITY DEHL Plant 4, Bldg 4  
Austin, Texas

WORK ID Air Force Plant 4 Ft. Worth  
TAKEN 2/4-2/5/86  
TRANS Federal 321175024  
TYPE H2O

P.O. # 212-027-27-40  
INVOICE under separate cover

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766

ATTEN  
PHONE (512) 454-4797

CONTACT FRENCH

*Larry French*  
CERTIFIED BY

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 86Q120  
02 86Q121  
03 86Q123  
04 86Q124  
05 86Q125  
06 Reagent Blank

## Analytical Serv TEST CODES and NAMES used on this report

EX 622 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MSNS S GCMS Characterization-ABN  
MS 608 Pesticides & PCBs by GC/MS

PAGE 2  
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Analytical Serv REPORT  
RESULTS BY TEST

LAB # 86-02-030

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| EX 625        | 02/06/86        | 02/06/86        | 02/06/86        | 02/06/86        | 02/06/86        |
| date complete |                 |                 |                 |                 |                 |

| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| EX 625        | 02/06/86        |
| date complete |                 |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860120

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 02/04/86

Category

DATA FILE 2CU02030C01

DATE EXTRACTED 02/06/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

#2

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 473 | 65A                        | phenol |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            | 3      |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 471 AS1   | d3-phenol            | 116    |
| 354 AS2   | 2-fluorophenol       | 147    |
| 1105 AS3  | 2,4,6-tribromophenol | 139    |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860120

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/04/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860120

FRACTION 01A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/04/86

Category

DATA FILE 2CU02030C01

DATE EXTRACTED 02/06/86

ANALYST

HJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

f2

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | 2 BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860120

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 88  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 399 BS1   | d5-nitrobenzene 47  |
| 874 BS2   | 2-fluorobiphenyl 53 |
| 1472 BS3  | d14-terphenyl 31    |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860120

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-030

SAMPLE ID 860120

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/04/86 Category

CHRO # 2CU02030C1  
SAMPLE SIZE 1

DATE ANALYZED 02/16/86 UNITS ug/l VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

PCB

ND

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Analytical Serv  
Results by Sample

LAB # 86-02-030

SAMPLE ID 860120

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/04/86 Category

DATA FILE 26U02030C01  
CONC. FACTOR

DATE EXTRACTED 02/06/86  
DATE INJECTED 02/16/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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SAMPLE ID 860120

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/04/86

Category

DATA FILE 2CU02030C02

DATE EXTRACTED 02/06/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 471 | phenol                     | 4      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 469 AS1   | d3-phenol            | 143    |
| 349 AS2   | 2-fluorophenol       | 126    |
| 1106 AS3  | 2,4,6-tribromophenol | 142    |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/04/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/04/86

Category

DATA FILE 2CU02030C02

DATE EXTRACTED 02/06/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

#2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1633   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1316   | 68B | di-butyl phthalate         | 4 BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/04/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2  
30

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>599</u> BS1  | d5-nitrobenzene <u>73</u>  |
| <u>874</u> BS2  | 2-fluorobiphenyl <u>30</u> |
| <u>1472</u> BS3 | d14-terphenyl <u>28</u>    |
| BS4             | d10-biphenyl               |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute at high concentrations.



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REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv      REPORT  
Results by Sample

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A      TEST CODE MSNS S      NAME GCMS Characterization-ABN  
Date & Time Collected 02/04/86      Category

CHRO # 2CU02030C2  
SAMPLE SIZE 1

DATE ANALYZED 02/16/86      UNITS ug/l      VERIFIED BY LAK

| SCAN | COMPOUND | RESULT | CONF<br>LEVEL | REF<br>CMPD |
|------|----------|--------|---------------|-------------|
|------|----------|--------|---------------|-------------|

|     |  |    |  |  |
|-----|--|----|--|--|
| PCB |  | ND |  |  |
|-----|--|----|--|--|

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860121

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category

DATA FILE 2CU02030C02

DATE EXTRACTED 02/06/86

ANALYST MJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/16/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860121

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/04/86

Category

DATA FILE 2CU02030C03

DATE EXTRACTED 02/06/86

ANALYST

VERIFIED BY LAK

JNC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

WJL

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 47Q 65A | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 469 AS1   | d5-phenol            | 81     |
| 352 AS2   | 2-fluorophenol       | 97     |
| 1104 AS3  | 2,4,6-tribromophenol | 73     |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/04/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860123

FRACTION Q3A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

DATA FILE 2CU02030C03

DATE EXTRACTED 02/06/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | 3 BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2 3 10

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>597</u> BS1  | d5-nitrobenzene <u>68</u>  |
| <u>873</u> BS2  | 2-fluorobiphenyl <u>44</u> |
| <u>1471</u> BS3 | d14-terphenyl <u>32</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/04/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

SAMPLE ID 860123

FRACTION 03A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/04/86

Category

CHRO # 2CU02030C3

SAMPLE SIZE 1

DATE ANALYZED 02/16/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

PCB

ND

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID 860123

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category

DATA FILE 20U02030C03

CONC. FACTOR

DATE EXTRACTED 02/06/86

DATE INJECTED 02/16/86

ANALYST

WJL

VERIFIED BY LAK

COMPOUNDS DETECTED Q

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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RECEIVED: 02/06/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860123

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/04/86

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category

DATA FILE 2CU02030C04

CONC. FACTOR 1

DATE EXTRACTED 02/06/86

DATE INJECTED 02/21/86

ANALYST

INSTRUMENT

WJL

f2

VERIFIED BY LAK

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 481 65A | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

2 315

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 479 AS1   | d3-phenol            | 74     |
| 352 AS2   | 2-fluorophenol       | 87     |
| 1114 AS3  | 2,4,6-tribromophenol | 52     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

LAB # 86-02-030

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

DATA FILE 2CU02030C04  
CONC. FACTOR 1

DATE EXTRACTED 02/06/86  
DATE INJECTED 02/16/86

ANALYST WJL  
INSTRUMENT f2

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1666   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1325   | 68B | di-butyl phthalate         | 1 BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>60B</u> 851  | d5-nitrobenzene <u>42</u>  |
| <u>88B</u> 852  | 2-fluorobiphenyl <u>36</u> |
| <u>148B</u> 853 | d14-terphenyl <u>38</u>    |
| 854             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860124

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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SAMPLE ID 860124

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/05/86 Category

CHRO # 2EU02030C4  
SAMPLE SIZE 1

DATE ANALYZED 02/16/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

PCB

ND

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RECEIVED: 02/06/86

Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

SAMPLE ID 860124

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/05/86 Category

DATA FILE 2CU02030C04  
CONC. FACTOR

DATE EXTRACTED 02/06/86  
DATE INJECTED 02/16/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

Results by Sample

LAB # 86-02-030

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SAMPLE ID 860124

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/05/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category

DATA FILE 2CU02037002

DATE EXTRACTED 02/06/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

ANALYST

WJL

INSTRUMENT

f2

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 480 AS1   | d5-phenol            | 66     |
| 364 AS2   | 2-fluorophenol       | 81     |
| 1112 AS3  | 2,4,6-tribromophenol | 53     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/05/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

DATA FILE 2CU02030C03

DATE EXTRACTED 02/06/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/16/86

INSTRUMENT

COMPOUNDS DETECTED Q

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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REPORT

Results by Sample

LAB # 86-02-030

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SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/05/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>607</u> BS1  | d5-nitrobenzene <u>53</u>  |
| <u>880</u> BS2  | 2-fluorobiphenyl <u>41</u> |
| <u>1480</u> BS3 | d14-terphenyl <u>37</u>    |
| BS4             | d10-biphenyl               |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID 860125

FRACTION 05A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/05/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-030

SAMPLE ID 860125  
FRACTION 05A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/05/86 Category

CHRD # 2CU0203QC3  
SAMPLE SIZE 1

DATE ANALYZED 02/16/86

UNITS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

PCB

ND

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

SAMPLE ID 860125

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/05/86

Category

DATA FILE 2CU02030C03

DATE EXTRACTED 02/06/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/16/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

Continued From Above

SAMPLE ID 860125

FRACTION 05A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/05/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

DATA FILE 2EU02024C0Z  
CONC. FACTOR 1

DATE EXTRACTED 02/06/86  
DATE INJECTED 02/21/86

ANALYST WJL  
INSTRUMENT f2

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT            |
|-----------------|----------------------|-------------------|
| <u>487</u> AS1  | d5-phenol            | <u>143</u>        |
| <u>370</u> AS2  | 2-fluorophenol       | <u>90</u>         |
| <u>1120</u> AS3 | 2,4,6-tribromophenol | <u>120</u>        |
| AS4             | d3-phenol            | <u>          </u> |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

REPORT

LAB # 86-02-030

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

DATA FILE 2EU02024C0Z  
CONC. FACTOR 1

DATE EXTRACTED 02/06/86  
DATE INJECTED 02/21/86

ANALYST WJL  
INSTRUMENT F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | 3      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 614 BS1   | d5-nitrobenzene 94  |
| 888 BS2   | 2-fluorobiphenyl 87 |
| 1487 BS3  | d14-terphenyl 62    |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

S = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv      REPORT  
Results by Sample

LAB # 86-02-030

SAMPLE ID Reagent Blank

FRACTION 06A      TEST CODE MSNS S      NAME GCMS Characterization-ABN  
Date & Time Collected not specified      Category                     

CHRO # 2CB02024C7  
SAMPLE SIZE 1

DATE ANALYZED 02/21/86      UNITS ug/l      VERIFIED BY LAK

| SCAN | COMPOUND   | RESULT                      | CONF<br>LEVEL               | REF<br>CMPD                 |
|------|------------|-----------------------------|-----------------------------|-----------------------------|
|      | <u>PCB</u> | <u>                    </u> | <u>                    </u> | <u>                    </u> |
|      |            |                             |                             | <u>ND</u>                   |

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Analytical Serv

REPORT

LAB # 86-02-030

Results by Sample

SAMPLE ID Reagent Blank

FRACTION 06A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 2CB02024C07

DATE EXTRACTED 02/06/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/21/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-030

Continued From Above

SAMPLE ID Reagent Blank

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-030

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

04B ! DUP\_NS  
05B ! DUP\_NS

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## Analytical Serv

## REPORT

LAB # 86-02-031

02/27/86 17:46:55

REPORT Radian  
TO BL 4  
Austin  
ATTN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTN  
PHONE (512) 454-4797

*Carl Scott*  
CERTIFIED BY

CONTACT CONOVER

\*\*Unknown compound eluting here.

Second column confirmation for EPA 601 on -04; for EPA 602 on -04 and -03.

WORK ID groundwater

TAKEN NR  
TRANS Fed Ex  
TYPE

P.O. # 212-027-27-40  
INVOICE under separate cover

### Footnotes and Comments

\* Indicates a value less than 3 times the detection limit.  
Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

### SAMPLE IDENTIFICATION

01 860122  
02 860124  
03 860125  
04 860127  
05 860128  
06 860129  
07 field blank  
08 trip blank

### Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPE  
AS GA Arsenic, low level  
BA E Barium, ICPE  
CD E Cadmium, ICPE  
CR E Chromium, ICPE  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons in soil  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level  
XYLENE Xylenes

PAGE 2  
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Analytical Serv  
RESULTS BY TEST

LAB # 86-02-031

REPORT

| TEST CODE               | Sample 01<br>(entered units) | Sample 02<br>(entered units) | Sample 03<br>(entered units) | Sample 04<br>(entered units) | Sample 05<br>(entered units) |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| AG E<br>ug/ml           | 0.007*                       | 0.007*                       | 0.007*                       |                              |                              |
| AS GA<br>ug/ml          | <.005                        | <.005                        | <.005                        |                              |                              |
| BA E<br>ug/ml           | 0.076                        | 0.076                        | 0.072                        |                              |                              |
| CD E<br>ug/ml           | <.002                        | <.002                        | <.002                        |                              |                              |
| CR E<br>ug/ml           | 0.007*                       | 0.007*                       | <.005                        |                              |                              |
| DG3020<br>date complete | 02/12/86                     | 02/12/86                     | 02/12/86                     |                              |                              |
| DG6010<br>date complete | 02/11/86                     | 02/11/86                     | 02/11/86                     |                              |                              |
| HC IR<br>ug/g           | <1                           | <1                           | <1                           | 26                           | <1                           |
| HG CA<br>ug/ml          | <.0002                       | <.0002                       | <.0002                       | mg/L                         | mg/L                         |
| DNG IR<br>mg/L          | <1                           | <1                           | <1                           |                              |                              |
| PB GA<br>ug/ml          | 0.032                        | 0.032                        | <.002                        |                              |                              |
| SE GA<br>ug/ml          | <.003e                       | <.003e                       | <.003                        |                              |                              |

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Analytical Serv  
RESULTS BY TEST

LAB # 86-02-031

|               |                 |
|---------------|-----------------|
| TEST CODE     | Sample 06       |
| default units | (entered units) |
| ONG IR        | <1              |
| mg/L          |                 |



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Analytical Serv

REPORT

LAB # 86-02-031

Results by Sample

SAMPLE ID 860124

FRACTION 02C

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/05/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_VERIFIED BY MCL  
COMPOUNDS DETECTED \_\_\_\_\_

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | —    | Trichloroethene             | ND     |
| —    | Bromomethane              | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| —    | Chloroform                | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| —    | Bromodichloromethane      | ND     |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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SAMPLE ID 860124  
Analytical Serv REPORT  
Results by Sample  
LAB # 86-02-031  
Continued From Above  
FRACTION 02C TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/05/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-031

Results by Sample

SAMPLE ID 860124

FRACTION 02E

NAME EPA Method 602/GC

Date &amp; Time Collected 02/05/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_VERIFIED BY MCL  
COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

RECEIVED: 02/06/86

Results by Sample

SAMPLE ID 860125

FRACTION 03C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/05/86

Category

DATA FILE 9 DATE INJECTED 02/06/86

VERIFIED BY MCL

CONC. FACTOR

ANALYST RP

COMPOUNDS DETECTED 0

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
|      | Chloromethane             | ND     |      | Trichloroethene             | ND     |
|      | Bromomethane              | ND     |      | Dibromochloromethane *      | ND     |
|      | Vinyl Chloride            | ND     |      | 1,1,2-Trichloroethane *     | ND     |
|      | Chloroethane              | ND     |      | cis-1,3-Dichloropropene *   | ND     |
|      | Methylene Chloride        | ND     |      | 2-Chloroethylvinyl Ether    | ND     |
|      | Trichlorofluoromethane    | ND     |      | Bromoform                   | ND     |
|      | 1,1-Dichloroethene        | ND     |      | 1,1,2,2-Tetrachloroethane # | ND     |
|      | 1,1-Dichloroethane        | ND     |      | Tetrachloroethylene #       | ND     |
|      | trans-1,2-Dichloroethene  | ND     |      | Chlorobenzene               | ND     |
|      | Chloroform                | ND     |      | 1,3-Dichlorobenzene         | ND     |
|      | 1,2-Dichloroethane        | ND     |      | 1,2-Dichlorobenzene         | ND     |
|      | 1,1,1-Trichloroethane     | ND     |      | 1,4-Dichlorobenzene         | ND     |
|      | Carbon Tetrachloride      | ND     |      |                             |        |
|      | Bromodichloromethane      | ND     |      |                             |        |
|      | 1,2-Dichloropropane       | ND     |      |                             |        |
|      | trans-1,3-Dichloropropene | ND     |      |                             |        |

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 RECEIVED: 02/06/86  
 SAMPLE ID 860125  
 Analytical Serv REPORT  
 Results by Sample  
 LAB # 86-02-031  
 Continued From Above  
 FRACTION 03C TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/05/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
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 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

RECEIVED: 02/06/86

Results by Sample

SAMPLE ID 860125

FRACTION 03E TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/05/86

Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/06/86 ANALYST \_\_\_\_\_ RP VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-031

-out 10  
RECEIVED 02/06/86

SAMPLE ID 860127

FRACTION 04B

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/05/86

Category

DATA FILE Q DATE INJECTED 02/06/86  
CONC FACTOR       ANALYST RP VERIFIED BY MCL  
INSTRUMENT 9 COMPOUNDS DETECTED 3

| SCAN          | COMPOUND                  | RESULT        | SCAN          | COMPOUND                    | RESULT      |
|---------------|---------------------------|---------------|---------------|-----------------------------|-------------|
| <u>      </u> | Chloromethane             | <u>ND</u>     | <u>3</u>      | Trichloroethene             | <u>0.96</u> |
| <u>      </u> | Bromomethane              | <u>ND</u>     | <u>      </u> | Dibromochloromethane *      | <u>ND</u>   |
| <u>1</u>      | Vinyl Chloride            | <u>0.33</u>   | <u>      </u> | 1,1,2-Trichloroethene *     | <u>ND</u>   |
| <u>      </u> | Chloroethane              | <u>ND</u>     | <u>      </u> | cis-1,3-Dichloropropene *   | <u>ND</u>   |
| <u>2</u>      | Methylene Chloride        | <u>0.32</u>   | <u>      </u> | 2-Chloroethylvinyl Ether    | <u>ND</u>   |
| <u>3</u>      | Trichlorofluoromethane    | <u>2.45</u>   | <u>      </u> | Bromoform                   | <u>ND</u>   |
| <u>      </u> | 1,1-Dichloroethene        | <u>ND</u>     | <u>      </u> | 1,1,2,2-Tetrachloroethane # | <u>ND</u>   |
| <u>      </u> | 1,1-Dichloroethane        | <u>ND</u>     | <u>      </u> | Tetrachloroethylene #       | <u>ND</u>   |
| <u>4</u>      | trans-1,2-Dichloroethene  | <u>7.37**</u> | <u>      </u> | Chlorobenzene               | <u>ND</u>   |
| <u>      </u> | Chloroform                | <u>ND</u>     | <u>      </u> | 1,3-Dichlorobenzene         | <u>ND</u>   |
| <u>      </u> | 1,2-Dichloroethane        | <u>ND</u>     | <u>      </u> | 1,2-Dichlorobenzene         | <u>ND</u>   |
| <u>      </u> | 1,1,1-Trichloroethane     | <u>ND</u>     | <u>      </u> | 1,4-Dichlorobenzene         | <u>ND</u>   |
| <u>      </u> | Carbon Tetrachloride      | <u>ND</u>     |               |                             |             |
| <u>      </u> | Bromodichloromethane      | <u>ND</u>     |               |                             |             |
| <u>      </u> | 1,2-Dichloropropane       | <u>ND</u>     |               |                             |             |
| <u>      </u> | trans-1,3-Dichloropropene | <u>ND</u>     |               |                             |             |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-031

Continued From Above

SAMPLE ID 860127

FRACTION 04B TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/05/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

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#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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Analytical Serv  
Results by Sample

LAB # 86-02-031

SAMPLE ID 860127

FRACTION 04D TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/05/86 Category

DATA FILE D DATE INJECTED 02/06/86 ANALYST RP VERIFIED BY MCL  
CONC. FACTOR - INSTRUMENT d COMPOUNDS DETECTED 1

| SCAN     | COMPOUND      | RESULT        | SCAN     | COMPOUND            | RESULT    |
|----------|---------------|---------------|----------|---------------------|-----------|
| <u>1</u> | Benzene       | <u>8442</u> ; | <u>—</u> | 1,4-Dichlorobenzene | <u>ND</u> |
| <u>—</u> | Toluene       | <u>ND</u> ;   | <u>—</u> | 1,3-Dichlorobenzene | <u>ND</u> |
| <u>—</u> | Ethyl Benzene | <u>ND</u> ;   | <u>—</u> | 1,2-Dichlorobenzene | <u>ND</u> |
| <u>—</u> | Chlorobenzene | <u>ND</u> ;   | <u>—</u> |                     |           |

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-031

SAMPLE ID 860128

FRACTION 05B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/05/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | —    | Trichloroethene             | ND     |
| —    | Bromomethane              | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| —    | Chloroform                | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| —    | Bromodichloromethane      | ND     |      |                             |        |
| 1    | 1,2-Dichloropropane       | 1.70   |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-031

Continued From Above

SAMPLE ID 860128

FRACTION 058 TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/05/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

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ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

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#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-031

SAMPLE ID 860128

FRACTION 05D TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/05/86

Category

DATA FILE     D     DATE INJECTED 02/06/86 ANALYST     RP     VERIFIED BY MCL  
CONC. FACTOR      INSTRUMENT     d     COMPOUNDS DETECTED     0    

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

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All results reported in     ug/L     unless otherwise specified.  
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Analytical Serv  
Results by Sample

LAB # 86-02-031

SAMPLE ID 860129

FRACTION 06D TEST CODE XYLENE NAME Xylenes  
Date & Time Collected 02/05/86 Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MGL  
COMPOUNDS DETECTED 0

SCAN COMPOUND RESULT

— p-xylene — ND ;

— m-xylene — ND ;

— o-xylene — ND ;

NOTES AND DEFINITIONS FOR THIS REPORT.

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All results reported in \_\_\_\_\_ug/L unless otherwise specified.  
ND = not detected.

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REPORT

LAB # 86-02-031

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Results by Sample

SAMPLE ID field blank

FRACTION 07A

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected not specified

Category

DATA FILE 02/06/86  
CONC. FACTORANALYST RP  
INSTRUMENT 9  
VERIFIED BY MCL  
COMPOUNDS DETECTED 0

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
|      | Chloromethane             | ND     |      | Trichloroethene             | ND     |
|      | Bromomethane              | ND     |      | Dibromochloromethane *      | ND     |
|      | Vinyl Chloride            | ND     |      | 1,1,2-Trichloroethane *     | ND     |
|      | Chloroethane              | ND     |      | cis-1,3-Dichloropropene *   | ND     |
|      | Methylene Chloride        | ND     |      | 2-Chloroethylvinyl Ether    | ND     |
|      | Trichlorofluoromethane    | ND     |      | Bromoform                   | ND     |
|      | 1,1-Dichloroethene        | ND     |      | 1,1,2,2-Tetrachloroethane # | ND     |
|      | 1,1-Dichloroethane        | ND     |      | Tetrachloroethylene #       | ND     |
|      | trans-1,2-Dichloroethene  | ND     |      | Chlorobenzene               | ND     |
|      | Chloroform                | ND     |      | 1,3-Dichlorobenzene         | ND     |
|      | 1,2-Dichloroethane        | ND     |      | 1,2-Dichlorobenzene         | ND     |
|      | 1,1,1-Trichloroethane     | ND     |      | 1,4-Dichlorobenzene         | ND     |
|      | Carbon Tetrachloride      | ND     |      |                             |        |
|      | Bromodichloromethane      | ND     |      |                             |        |
|      | 1,2-Dichloropropane       | ND     |      |                             |        |
|      | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-031

Continued From Above

SAMPLE ID field blank

FRACTION 07A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected not specified

Category

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#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-031

SAMPLE ID field blank

FRACTION 07B

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

D

DATE INJECTED 02/06/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND     | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 1.73   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND     | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND     | —    |                     |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-031

SAMPLE ID trip blank

FRACTION 08A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

| DATA FILE | CONC. FACTOR              | G      | DATE INJECTED | 02/06/86                    | ANALYST    | RP | VERIFIED BY MCL    |  |
|-----------|---------------------------|--------|---------------|-----------------------------|------------|----|--------------------|--|
|           |                           |        |               |                             | INSTRUMENT | g  | COMPOUNDS DETECTED |  |
|           |                           |        |               |                             |            |    | 1                  |  |
| SCAN      | COMPOUND                  | RESULT | SCAN          | COMPOUND                    | RESULT     |    |                    |  |
|           | Chloromethane             | ND     |               | Trichloroethene             | ND         |    |                    |  |
|           | Bromomethane              | ND     |               | Dibromochloromethane *      | ND         |    |                    |  |
|           | Vinyl Chloride            | ND     |               | 1,1,2-Trichloroethane *     | ND         |    |                    |  |
|           | Chloroethane              | ND     |               | cis-1,3-Dichloropropene *   | ND         |    |                    |  |
|           | Methylene Chloride        | ND     |               | 2-Chloroethylvinyl Ether    | ND         |    |                    |  |
| 1         | Trichlorofluoromethane    | 2.32   |               | Bromoform                   | ND         |    |                    |  |
|           | 1,1-Dichloroethene        | ND     |               | 1,1,2,2-Tetrachloroethane # | ND         |    |                    |  |
|           | 1,1-Dichloroethane        | ND     |               | Tetrachloroethylene #       | ND         |    |                    |  |
|           | trans-1,2-Dichloroethene  | ND     |               | Chlorobenzene               | ND         |    |                    |  |
|           | Chloroform                | ND     |               | 1,3-Dichlorobenzene         | ND         |    |                    |  |
|           | 1,2-Dichloroethane        | ND     |               | 1,2-Dichlorobenzene         | ND         |    |                    |  |
|           | 1,1,1-Trichloroethane     | ND     |               | 1,4-Dichlorobenzene         | ND         |    |                    |  |
|           | Carbon Tetrachloride      | ND     |               |                             |            |    |                    |  |
|           | Bromodichloromethane      | ND     |               |                             |            |    |                    |  |
|           | 1,2-Dichloropropane       | ND     |               |                             |            |    |                    |  |
|           | trans-1,3-Dichloropropene | ND     |               |                             |            |    |                    |  |

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 Analytical Serv  
 Results by Sample  
 REPORT  
 LAB # 86-02-031  
 Continued From Above  
 SAMPLE ID trip blank  
 FRACTION OBA  
 TEST CODE GC 601  
 NAME EPA Method 601/GC  
 Date & Time Collected not specified  
 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

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 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-031

SAMPLE ID trip blank

FRACTION 08A

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE        D  
CONC. FACTOR       

DATE INJECTED 02/06/86

ANALYST        RP  
INSTRUMENT        4

VERIFIED BY MCL  
COMPOUNDS DETECTED        Q

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   |      |                     |        |

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ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-031

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |     |   |        |     |   |        |
|-----|---|--------|-----|---|--------|-----|---|--------|
| 02D | : | DUP601 | 02F | : | DUP602 | 02H | : | DUP_NS |
| 03D | : | DUP601 | 03F | : | DUP602 | 03H | : | DUP_NS |
| 04C | : | DUP601 | 04E | : | DUP602 |     |   |        |
| 05C | : | DUP601 | 05E | : | DUP602 |     |   |        |
| 06E | : | DUP_NS |     |   |        |     |   |        |

AD-A198 442

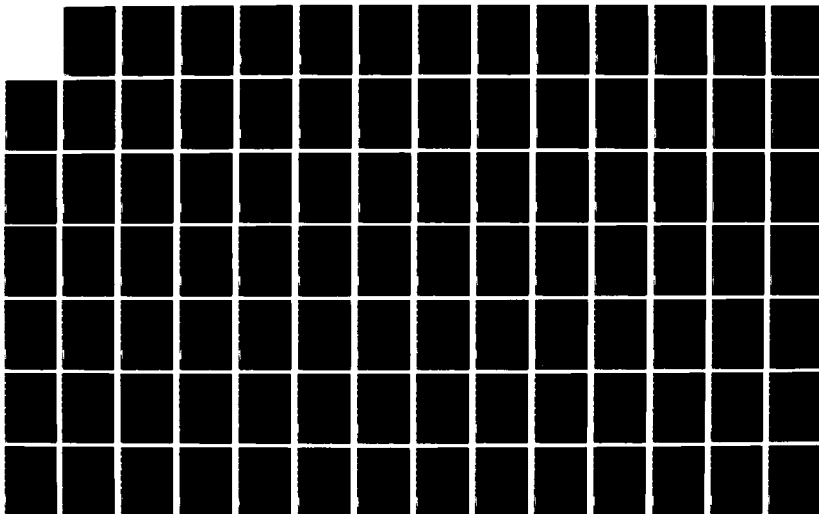
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

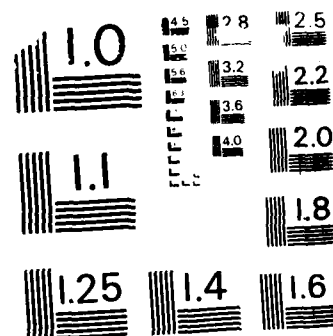
5/7

UNCLASSIFIED

F/G 24/7

ML





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

PAGE 1

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Analytical Serv

03/01/86 16:39:21

REPORT

LAB # 86-02-038

REPORT Radian Corporation

TO Larry French

Austin, Texas

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

ATTEN

PHONE (512) 454-4797

CONTACT FRENCH

CERTIFIED BY

CLIENT PLANT 4 SAMPLES 6

COMPANY General Dynamics

FACILITY DEHL Plant 4, Bldg 4

Austin, Texas

WORK ID General Dynamics Ft. Worth 4

TAKEN 2/6/86

TRANS Federal 321175046

TYPE H2O

P.O. # 212-027-27-40

INV. # 7450

Duplicate of report of 02/27/86.

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

**SAMPLE IDENTIFICATION**

01 860126  
02 860132  
03 860133  
04 860134  
05 860135  
06 duplicate anal. 860126  
06 reagent blank

**Analytical Serv TEST CODES and NAMES used on this report**

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MSNS S GCMS Characterization-ABN  
MS 608 Pesticides & PCBs by GC/MS

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Analytical Serv  
RESULTS BY TEST

REPORT  
LAB # 86-02-038

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| EX 625        | 02/10/86        | 02/10/86        | 02/10/86        | 02/10/86        | 02/10/86        |
| date complete |                 |                 |                 |                 |                 |

| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| EX 625        | 02/10/86        |
| date complete | 02/10/86        |



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Analytical Serv  
Results by Sample

LAB # 86-02-038

SAMPLE ID 860126  
FRACTION 01A  
Date & Time Collected 02/06/86  
TEST CODE M625 A  
NAME Method 625 Acid Compounds  
Category

DATA FILE 2CU02038C01  
CONC. FACTOR 1  
DATE EXTRACTED 02/10/86  
DATE INJECTED 02/24/86

ANALYST  
INSTRUMENT  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 486 | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 494 AS1   | d5-phenol            | 100    |
| 367 AS2   | 2-fluorophenol       | 150    |
| 1118 AS3  | 2,4,6-tribromophenol | 150    |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

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All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860126

FRACTION 01A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID 860126

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C01  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/24/86

ANALYST INSTRUMENT

LAK F2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID 860126

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 612 BS1   | d5-nitrobenzene 142 |
| 897 BS2   | 2-fluorobiphenyl 82 |
| 1485 BS3  | d14-terphenyl 64    |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations.

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REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860126

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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SAMPLE ID 860126

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/06/86 Category

CHRO # 2U02038C01

SAMPLE SIZE 1

DATE ANALYZED 02/24/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCBs

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID 860126

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C01

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/24/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

LAB # 86-02-038

Results by Sample

Continued From Above

SAMPLE ID 860126

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

DATA FILE 2CU0203BC02

DATE EXTRACTED 02/10/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/24/86

LAK

ANALYST INSTRUMENT

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 478 AS1   | d5-phenol            | 116    |
| 358 AS2   | 2-fluorophenol       | 130    |
| 1115 AS3  | 2,4,6-tribromophenol | 120    |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/06/86

Category

DATA FILE 2CU02038C02

DATE EXTRACTED 02/10/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/24/86

INSTRUMENT

F2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1664   | 66B | bis(2-ethylhexyl)phthalate | 4      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1324   | 68B | di-butyl phthalate         | 2      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |

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REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 148 | 418 | 4-bromophenyl phenyl ether  | ND | 88  | 798 | benzo(ghi)perylene     | ND |
| 128 | 428 | bis(2-chloroisopropyl)ether | ND | 328 | 808 | fluorene               | ND |
| 108 | 438 | bis(2-chloroethoxy)methane  | ND | 448 | 818 | phenanthrene B         | ND |
| 348 | 528 | hexachlorobutadiene         | ND | 198 | 828 | dibenzo(a,h)anthracene | ND |
| 358 | 538 | hexachlorocyclopentadiene   | ND | 378 | 838 | indeno(1,2,3-cd)pyrene | ND |
| 388 | 548 | isophorone                  | ND | 458 | 848 | pyrene                 | ND |
| 398 | 558 | naphthalene                 | ND |     |     |                        |    |
| 408 | 568 | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>608</u> BS1  | d5-nitrobenzene <u>100</u> |
| <u>893</u> BS2  | 2-fluorobiphenyl <u>78</u> |
| <u>1482</u> BS3 | d14-terphenyl <u>54</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations.

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REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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SAMPLE ID 860132

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/06/86 Category

CHRO # 2U02038C02

SAMPLE SIZE 1

DATE ANALYZED 02/24/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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RECEIVED: 02/07/86  
Analytical Serv  
Results by Sample

LAB # 86-02-038

SAMPLE ID 860132  
FRACTION 02A  
Date & Time Collected 02/06/86  
TEST CODE MS 608  
NAME Pesticides & PCBs by GC/MS  
Category

DATA FILE 2CU02038C02  
CONC. FACTOR  
DATE EXTRACTED 02/10/86  
DATE INJECTED 02/24/86

ANALYST LAK  
VERIFIED BY LAK  
COMPOUNDS DETECTED Q

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860132

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C03  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/25/86

ANALYST  
INSTRUMENT

WJL  
F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 491 AS1   | d5-phenol            | 120    |
| 367 AS2   | 2-fluorophenol       | 130    |
| 1113 AS3  | 2,4,6-tribromophenol | 130    |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/06/86

Category

DATA FILE 2CU02038C03

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT F2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1663   | 66B | bis(2-ethylhexyl)phthalate | 3      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1323   | 68B | di-butyl phthalate         | 2      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

|       |     |                             |    |     |     |                        |    |
|-------|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B   | 41B | 4-bromophenyl phenyl ether  | ND | 88  | 79B | benzo(ghi)perylene     | ND |
| 12B   | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B   | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B   | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B   | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 2 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 3 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B   | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>60B</u> BS1  | d5-nitrobenzene <u>130</u> |
| <u>89B</u> BS2  | 2-fluorobiphenyl <u>92</u> |
| <u>148B</u> BS3 | d14-terphenyl <u>72</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860133

FRACTION 03A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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LAB # 86-02-038

Results by Sample

SAMPLE ID 860133

FRACTION 03A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/06/86 Category

CHRD # 2U02038C03  
SAMPLE SIZE 1

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/25/86

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860133

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C03

CONC. FACTOR

DATE EXTRACTED 02/10/86

DATE INJECTED 02/23/86

ANALYST WJL

VERIFIED BY LAK

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID 860133

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C04

DATE EXTRACTED 02/10/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

WJL

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 28A        | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 31A        | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 482 AS1   | d5-phenol            | 130    |
| 366 AS2   | 2-fluorophenol       | 280    |
| 1114 AS3  | 2,4,6-tribromophenol | 72     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/06/86

Category

DATA FILE 2CU02038C04

DATE EXTRACTED 02/10/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT

F2

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1324   | 68B | di-butyl phthalate         | 2      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |

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Results by Sample

LAB # 86-02-038

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SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

|       |     |                             |    |     |     |                        |    |
|-------|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B   | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B   | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B   | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B   | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B   | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 2 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B   | 55B | naphthalene                 | ND |     |     |                        |    |
| 2 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>609</u> BS1  | d5-nitrobenzene <u>112</u> |
| <u>833</u> BS2  | 2-fluorobiphenyl <u>94</u> |
| <u>1491</u> BS3 | d14-terphenyl <u>88</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A (benzo(a)anthracene and chrysene co-elute) high concentrations.

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Results by Sample

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SAMPLE ID 860134

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/06/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID 860134

FRACTION 04A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/06/86

Category

CHRO # 2U02037CQ4

SAMPLE SIZE 1

DATE ANALYZED 02/23/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID 860134

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/06/86 CategoryDATA FILE 2CU0203BC04  
CONC. FACTORDATE EXTRACTED 02/10/86  
DATE INJECTED 02/23/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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REPORT

Results by Sample

LAB # 86-02-038

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SAMPLE ID 860134

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C03  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/25/86

ANALYST WJL  
INSTRUMENT F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 496 65A | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 494 AS1   | d5-phenol            | 105    |
| 372 AS2   | 2-fluorophenol       | 140    |
| 1137 AS3  | 2,4,6-tribromophenol | 140    |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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REPORT

Results by Sample

LAB # 86-02-038

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SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/06/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

LAB # 86-02-038

SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

DATA FILE 2CU02038C02

DATE EXTRACTED 02/10/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT

F2

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | 3      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Results by Sample

LAB # 86-02-038

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SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/06/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2 400

## SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>625</u> BS1  | d5-nitrobenzene <u>122</u> |
| <u>904</u> BS2  | 2-fluorobiphenyl <u>80</u> |
| <u>1506</u> BS3 | d14-terphenyl <u>78</u>    |
| BS4             | d10-biphenyl               |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).

\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.

A (enzo(a)anthracene and chrysene co-elute) high concentrations.

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Results by Sample

REPORT

LAB # 86-02-038

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SAMPLE ID 860135

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/06/86

Category

8 = anthracene and phenanthrene co-elute in high concentrations.  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID 860135

FRACTION 05A TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/06/86

Category

CHRD # 2U02038C05

SAMPLE SIZE 1

DATE ANALYZED 02/25/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCBs

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Results by Sample

LAB # 86-02-038

SAMPLE ID 860135

FRACTION 05A

TEST CODE MS 608

NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 02/06/86

Category

DATA FILE 2CU02038C05

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/23/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID 860135

FRACTION 05A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/06/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

NO = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 2CD02038C06

DATE EXTRACTED 02/10/86

DATE INJECTED 02/24/86

ANALYST

LAK

F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 484 65A | phenol                     | 3      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 483 AS1   | d5-phenol            | 130    |
| 367 AS2   | 2-fluorophenol       | 290    |
| 1114 AS3  | 2,4,6-tribromophenol | 81     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

| DATA FILE 2CD02038C06 |        | DATE EXTRACTED 02/10/86     |                        | ANALYST    |     | VERIFIED BY LAK            |        |
|-----------------------|--------|-----------------------------|------------------------|------------|-----|----------------------------|--------|
| CONC.                 | FACTOR | 1                           | DATE INJECTED 02/24/86 | INSTRUMENT | F2  | COMPOUNDS DETECTED         | 1      |
| NPDES SCAN            | EPA    | COMPOUND                    | RESULT                 | NPDES SCAN | EPA | COMPOUND                   | RESULT |
| 1B                    | 1B     | acenaphthene                | ND                     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B                    | 5B     | benzidine                   | ND                     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B                   | 8B     | 1,2,4-trichlorobenzene      | ND                     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B                   | 9B     | hexachlorobenzene           | ND                     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B                   | 12B    | hexachloroethane            | ND                     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 211B                  | 18B    | bis(2-chloroethyl)ether     | ND                     | 26B 1324   | 68B | di-butyl phthalate         | 3      |
| 16B                   | 20B    | 2-chloronaphthalene         | ND                     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B                   | 25B    | 1,2-dichlorobenzene         | ND                     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B                   | 26B    | 1,3-dichlorobenzene         | ND                     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B                   | 27B    | 1,4-dichlorobenzene         | ND                     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B                   | 28B    | 3,3'-dichlorobenzidine      | ND                     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B                   | 35B    | 2,4-dinitrotoluene          | ND                     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B                   | 36B    | 2,6-dinitrotoluene          | ND                     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B                   | 37B    | 1,2-diphenylhydrazine       | ND                     | 18B        | 76B | chrysene A                 | ND     |
| 31B                   | 39B    | fluoranthene                | ND                     | 2B         | 77B | acenaphthylene             | ND     |
| 17B                   | 40B    | 4-chlorophenyl phenyl ether | ND                     | 3B         | 78B | anthracene R               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 88  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2 408

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>610</u> BS1  | d5-nitrobenzene <u>102</u> |
| <u>883</u> BS2  | 2-fluorobiphenyl <u>78</u> |
| <u>1114</u> BS3 | d14-terphenyl <u>62</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A (enzo(a)anthracene and chrysene co-elute) high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

CHRO # 2D02038C06

SAMPLE SIZE 1

VERIFIED BY LAK

DATE ANALYZED 02/24/86

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCBs

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 2CD02038C06  
CONC. FACTOR

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/24/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID duplicate anal. 860126

FRACTION 06B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected not specified

Category

DATA FILE 2E802038C06

CONC. FACTOR 1

DATE EXTRACTED 02/10/86

DATE INJECTED 02/24/86

ANALYST

INSTRUMENT

LAK

F2

VERIFIED BY LAK

COMPOUNDS DETECTED Q

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 477 AS1   | d5-phenol            | 140    |
| 360 AS2   | 2-fluorophenol       | 200    |
| 1114 AS3  | 2,4,6-tribromophenol | 78     |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/07/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE 2EB02038C06  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/24/86

ANALYST  
INSTRUMENT

LAK  
F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bi(2-chloroethoxy)methane   | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2 41 6

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>606</u> BS1  | d5-nitrobenzene <u>146</u> |
| <u>832</u> BS2  | 2-fluorobiphenyl <u>81</u> |
| <u>1480</u> BS3 | d14-terphenyl <u>94</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A (enzo(a)anthracene and chrysene co-elute) high concentrations.

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RECEIVED: 02/07/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

Continued From Above

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-038

Results by Sample

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

CHRD # 2802038C06

SAMPLE SIZE 1

DATE ANALYZED 02/24/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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RECEIVED: 02/07/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-038

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 2EB02038C06

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/24/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-038

Continued From Above

SAMPLE ID reagent blank

FRACTION 06C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

REPORT

LAB # 86-02-038

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |
|-----|---|--------|
| 01B | : | DUP_NS |
| 02B | : | DUP_NS |
| 03B | : | DUP_NS |
| 04B | : | DUP_NS |
| 05B | : | DUP_NS |

PAGE 1

RECEIVED: 02/07/86

Analytical Serv

REPORT

LAB # 86-02-041

02/27/86 17:56:44

REPORT Radian

TO Bl. 4

Austin

ATTEN Larry French

CLIENT PLANT 4

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 8

WORK ID groundwater

TAKEN NR

TRANS Fed Ex

TYPE

P. O. # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

Unknown compound eluting here.

Second column confirmation performed for EPA 601: -02, -03,

-04, -05, -06; for EPA 602: -02, -03.

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

e Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 860126  
02 860130  
03 860131  
04 860132  
05 860134  
06 860135  
07 field blank  
08 trip blank

## Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs  
AS GA Arsenic, low level  
BA E Barium, ICPEs  
CD E Cadmium, ICPEs  
CR E Chromium, ICPEs  
DQ3020 Digestion by Method 3020  
DQ6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons in soil  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

PAGE 2

RECEIVED: 02/07/86

Analytical Serv

REPORT

LAB # 86-02-041

RESULTS BY TEST

| TEST CODE                 | Sample 01<br>(entered units) | Sample 02<br>(entered units) | Sample 03<br>(entered units) | Sample 04<br>(entered units) | Sample 05<br>(entered units) |
|---------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| AG E<br>ug/ml             | <.002                        | 0.003*                       | <.002                        | 0.003*                       | <.002                        |
| AS GA<br>ug/ml            | <.005                        | <.005                        | <.005                        | <.005                        | 0.010*                       |
| BA E<br>ug/ml             | 0.076                        | 0.51                         | 0.53                         | 0.054                        | 0.17                         |
| CD E<br>ug/ml             | <.002                        | <.002                        | <.002                        | <.002                        | <.002                        |
| CR E<br>ug/ml             | 0.007*                       | 0.019*                       | 0.019*                       | 0.12                         | 0.048                        |
| 2 DG3020<br>date complete | 02/12/86                     | 02/12/86                     | 02/12/86                     | 02/12/86                     | 02/12/86                     |
| 4 DG6010<br>date complete | 02/11/86                     | 02/11/86                     | 02/11/86                     | 02/11/86                     | 02/11/86                     |
| HC IR<br>ug/g             | <1.0<br>mg/L                 | <1.0<br>mg/L                 | <1.0<br>mg/L                 | <.0002                       | <.0002                       |
| HG CA<br>ug/ml            | 0.0002*                      | <.0002                       | 0.0003*                      | <.0002                       | <.0002                       |
| ONG IR<br>mg/L            | 1.1*                         | 1.1*                         | 1.1*                         |                              |                              |
| PB GA<br>ug/ml            | <.002                        | <.002                        | <.002                        | 0.003*                       | 0.005*                       |
| SE GA<br>ug/ml            | 0.003*                       | <.002                        | 0.003*                       | <.002                        | <.002                        |

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Analytical Serv

REPORT

LAB # 86-02-041

RESULTS BY TEST

| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| AG_E          | <.002           |
| ug/ml         |                 |
| AS_GA         | <.005           |
| ug/ml         |                 |
| BA_E          | 0.099           |
| ug/ml         |                 |
| CD_E          | <.002           |
| ug/ml         |                 |
| CR_E          | <.005           |
| ug/ml         |                 |
| DG3020        | 02/12/86        |
| date complete |                 |
| DG6010        | 02/11/86        |
| date complete |                 |
| HG_CA         | <.0002          |
| ug/ml         |                 |
| PB_GA         | 0.003*          |
| ug/ml         |                 |
| SE_GA         | <.002           |
| ug/ml         |                 |

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Analytical Serv

REPORT

LAB # 86-02-041

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Results by Sample

SAMPLE ID 860126

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/11/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | —    | Trichloroethene             | ND     |
| —    | Bromomethane              | ND     | —    | Dibromochloromethane *      | ND     |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| —    | Chloroform                | ND     | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| —    | Bromodichloromethane      | ND     |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv  
Results by Sample

LAB # 86-02-041  
Continued From Above

SAMPLE ID 860126

FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/06/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
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\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID 860126

FRACTION O1C

TEST CODE GC 602

NAME EPA Method 602/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

D

DATE INJECTED 02/10/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

RP \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED \_\_\_\_\_

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

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## Analytical Serv

## REPORT

LAB # 86-02-041

## Results by Sample

SAMPLE ID 860130

FRACTION 02A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/11/86

CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
COMPOUNDS DETECTED 3

| SCAN  | COMPOUND                  | RESULT | SCAN  | COMPOUND                    | RESULT |
|-------|---------------------------|--------|-------|-----------------------------|--------|
| _____ | Chloromethane             | ND     | 2     | Trichloroethene             | 10,979 |
| _____ | Bromomethane              | ND     | _____ | Dibromochloromethane *      | ND     |
| _____ | Vinyl Chloride            | ND     | _____ | 1,1,2-Trichloroethane *     | ND     |
| _____ | Chloroethane              | ND     | _____ | cis-1,3-Dichloropropene *   | ND     |
| _____ | Methylene Chloride        | ND     | _____ | 2-Chloroethylvinyl Ether    | ND     |
| _____ | Trichlorofluoromethane    | ND     | _____ | Bromoform                   | ND     |
| _____ | 1,1-Dichloroethene        | ND     | _____ | 1,1,2,2-Tetrachloroethane # | ND     |
| _____ | 1,1-Dichloroethane        | ND     | _____ | Tetrachloroethylene #       | ND     |
| 1     | trans-1,2-Dichloroethene  | 3067^  | 3     | Chlorobenzene               | 308    |
| _____ | Chloroform                | ND     | _____ | 1,3-Dichlorobenzene         | ND     |
| _____ | 1,2-Dichloroethane        | ND     | _____ | 1,2-Dichlorobenzene         | ND     |
| _____ | 1,1,1-Trichloroethane     | ND     | _____ | 1,4-Dichlorobenzene         | ND     |
| _____ | Carbon Tetrachloride      | ND     |       |                             |        |
| _____ | Bromodichloromethane      | ND     |       |                             |        |
| _____ | 1,2-Dichloropropane       | ND     |       |                             |        |
| _____ | trans-1,3-Dichloropropene | ND     |       |                             |        |



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REPORT

Results by Sample

LAB # 86-02-041

Continued From Above

SAMPLE ID 860130

FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

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\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID 860130

FRACTION 02C

TEST CODE GC 602

NAME EPA Method 602/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_

DATE INJECTED 02/10/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED 1

CONC. FACTOR \_\_\_\_\_

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| 1     | Chlorobenzene | 737 ;  |       |                     |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

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REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID 860131

FRACTION 03A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_ G  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/12/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

RP \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 4

| SCAN  | COMPOUND                  | RESULT | SCAN  | COMPOUND                    | RESULT |
|-------|---------------------------|--------|-------|-----------------------------|--------|
| _____ | Chloromethane             | ND     | 3     | Trichloroethene             | 12.066 |
| _____ | Bromomethane              | ND     | _____ | Dibromochloromethane *      | ND     |
| _____ | Vinyl Chloride            | ND     | _____ | 1,1,2-Trichloroethane *     | ND     |
| _____ | Chloroethane              | ND     | _____ | cis-1,3-Dichloropropene *   | ND     |
| _____ | Methylene Chloride        | ND     | _____ | 2-Chloroethylvinyl Ether    | ND     |
| _____ | Trichlorofluoromethane    | ND     | _____ | Bromoform                   | ND     |
| _____ | 1,1-Dichloroethene        | ND     | _____ | 1,1,2,2-Tetrachloroethane # | ND     |
| _____ | 1,1-Dichloroethane        | ND     | _____ | Tetrachloroethylene #       | ND     |
| 1     | trans-1,2-Dichloroethene  | 3530~  | 4     | Chlorobenzene               | 771    |
| _____ | Chloroform                | ND     | _____ | 1,3-Dichlorobenzene         | ND     |
| _____ | 1,2-Dichloroethane        | ND     | _____ | 1,2-Dichlorobenzene         | ND     |
| 2     | 1,1,1-Trichloroethane     | 1.00   | _____ | 1,4-Dichlorobenzene         | ND     |
| _____ | Carbon Tetrachloride      | ND     |       |                             |        |
| _____ | Bromodichloromethane      | ND     |       |                             |        |
| _____ | 1,2-Dichloropropane       | ND     |       |                             |        |
| _____ | trans-1,3-Dichloropropene | ND     |       |                             |        |

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REPORT

LAB # 86-02-041

Results by Sample

Continued From Above

SAMPLE ID 860131

FRACTION Q3A

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

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ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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## REPORT

LAB # 86-02-041

## Results by Sample

SAMPLE ID 860131

FRACTION 03C

TEST CODE GC 602

NAME EPA Method 602/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE

D

DATE INJECTED 02/10/86

ANALYST  
INSTRUMENT

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

CONC. FACTOR

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
|      | Benzene       | ND ;   |      | 1,4-Dichlorobenzene | ND     |
|      | Toluene       | ND ;   |      | 1,3-Dichlorobenzene | ND     |
|      | Ethyl Benzene | ND ;   |      | 1,2-Dichlorobenzene | ND     |
| 1    | Chlorobenzene | 709 ;  |      |                     |        |

2 433

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

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SAMPLE ID 860132

## Analytical Serv

## REPORT

Results by Sample

LAB # 86-02-041

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/12/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED 2

| SCAN  | COMPOUND                  | RESULT | SCAN  | COMPOUND                    | RESULT |
|-------|---------------------------|--------|-------|-----------------------------|--------|
| _____ | Chloromethane             | ND     | 2     | Trichloroethene             | 602    |
| _____ | Bromomethane              | ND     | _____ | Dibromochloromethane *      | ND     |
| _____ | Vinyl Chloride            | ND     | _____ | 1,1,2-Trichloroethane *     | ND     |
| _____ | Chloroethane              | ND     | _____ | cis-1,3-Dichloropropene *   | ND     |
| _____ | Methylene Chloride        | ND     | _____ | 2-Chloroethylvinyl Ether    | ND     |
| _____ | Trichlorofluoromethane    | ND     | _____ | Bromoform                   | ND     |
| _____ | 1,1-Dichloroethene        | ND     | _____ | 1,1,2,2-Tetrachloroethane # | ND     |
| _____ | 1,1-Dichloroethane        | ND     | _____ | Tetrachloroethylene #       | ND     |
| 1     | trans-1,2-Dichloroethene  | 360°   | _____ | Chlorobenzene               | ND     |
| _____ | Chloroform                | ND     | _____ | 1,3-Dichlorobenzene         | ND     |
| _____ | 1,2-Dichloroethane        | ND     | _____ | 1,2-Dichlorobenzene         | ND     |
| _____ | 1,1,1-Trichloroethane     | ND     | _____ | 1,4-Dichlorobenzene         | ND     |
| _____ | Carbon Tetrachloride      | ND     |       |                             |        |
| _____ | Bromodichloromethane      | ND     |       |                             |        |
| _____ | 1,2-Dichloropropane       | ND     |       |                             |        |
| _____ | trans-1,3-Dichloropropene | ND     |       |                             |        |

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REPORT

Results by Sample

LAB # 86-02-041

Continued From Above

SAMPLE ID 860132

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

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ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID 860132

FRACTION 04C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/06/86

Category

DATA FILE  
CONC. FACTOR

D

DATE INJECTED 02/10/86

ANALYST  
INSTRUMENT

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN

COMPOUND

RESULT

SCAN

COMPOUND

RESULT

Benzene

ND

1,4-Dichlorobenzene

ND

Toluene

ND

1,3-Dichlorobenzene

ND

Ethyl Benzene

ND

1,2-Dichlorobenzene

ND

Chlorobenzene

ND

NOTES AND DEFINITIONS FOR THIS REPORT.

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Analytical Serv

REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID 860134

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

DATA FILE  
CONC. FACTOR

G

DATE INJECTED 02/12/86

ANALYST  
INSTRUMENT

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
|      | Chloromethane             | ND     | 1    | Trichloroethene             | 401    |
|      | Bromomethane              | ND     |      | Dibromochloromethane *      | ND     |
|      | Vinyl Chloride            | ND     |      | 1,1,2-Trichloroethane *     | ND     |
|      | Chloroethane              | ND     |      | cis-1,3-Dichloropropene *   | ND     |
|      | Methylene Chloride        | ND     |      | 2-Chloroethylvinyl Ether    | ND     |
|      | Trichlorofluoromethane    | ND     |      | Bromoform                   | ND     |
|      | 1,1-Dichloroethene        | ND     |      | 1,1,2,2-Tetrachloroethane # | ND     |
|      | 1,1-Dichloroethane        | ND     |      | Tetrachloroethylene #       | ND     |
|      | trans-1,2-Dichloroethene  | ND     |      | Chlorobenzene               | ND     |
|      | Chloroform                | ND     |      | 1,3-Dichlorobenzene         | ND     |
|      | 1,2-Dichloroethane        | ND     |      | 1,2-Dichlorobenzene         | ND     |
|      | 1,1,1-Trichloroethane     | ND     |      | 1,4-Dichlorobenzene         | ND     |
|      | Carbon Tetrachloride      | ND     |      |                             |        |
|      | Bromodichloromethane      | ND     |      |                             |        |
|      | 1,2-Dichloropropane       | ND     |      |                             |        |
|      | trans-1,3-Dichloropropene | ND     |      |                             |        |

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REPORT

Results by Sample

LAB # 86-02-041

Continued From Above

SAMPLE ID 860134

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

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ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

#Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Results by Sample

SAMPLE ID 860134 FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/06/86

Category           

DATA FILE        D DATE INJECTED 02/10/86 ANALYST        RP VERIFIED BY MCL  
CONC. FACTOR        INSTRUMENT        d COMPOUNDS DETECTED   0  

| SCAN          | COMPOUND      | RESULT      | SCAN          | COMPOUND            | RESULT    |
|---------------|---------------|-------------|---------------|---------------------|-----------|
| <u>      </u> | Benzene       | <u>ND ;</u> | <u>      </u> | 1,4-Dichlorobenzene | <u>ND</u> |
| <u>      </u> | Toluene       | <u>ND ;</u> | <u>      </u> | 1,3-Dichlorobenzene | <u>ND</u> |
| <u>      </u> | Ethyl Benzene | <u>ND ;</u> | <u>      </u> | 1,2-Dichlorobenzene | <u>ND</u> |
| <u>      </u> | Chlorobenzene | <u>ND ;</u> |               |                     |           |

NOTES AND DEFINITIONS FOR THIS REPORT.

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ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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REPORT

LAB # 86-02-041

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Results by Sample

SAMPLE ID 860135

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/12/86

ANALYST \_\_\_\_\_ RP VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ 9 COMPOUNDS DETECTED 2

CONC. FACTOR \_\_\_\_\_

| SCAN  | COMPOUND                  | RESULT | SCAN  | COMPOUND                    | RESULT |
|-------|---------------------------|--------|-------|-----------------------------|--------|
| _____ | Chloromethane             | ND     | 2     | Trichloroethene             | 3.90   |
| _____ | Bromomethane              | ND     | _____ | Dibromochloromethane *      | ND     |
| _____ | Vinyl Chloride            | ND     | _____ | 1,1,2-Trichloroethane *     | ND     |
| _____ | Chloroethane              | ND     | _____ | cis-1,3-Dichloropropene *   | ND     |
| _____ | Methylene Chloride        | ND     | _____ | 2-Chloroethylvinyl Ether    | ND     |
| _____ | Trichlorofluoromethane    | ND     | _____ | Bromoform                   | ND     |
| _____ | 1,1-Dichloroethene        | ND     | _____ | 1,1,2,2-Tetrachloroethane # | ND     |
| _____ | 1,1-Dichloroethane        | ND     | _____ | Tetrachloroethylene #       | ND     |
| 1     | trans-1,2-Dichloroethene  | 0.78^  | _____ | Chlorobenzene               | ND     |
| _____ | Chloroform                | ND     | _____ | 1,3-Dichlorobenzene         | ND     |
| _____ | 1,2-Dichloroethane        | ND     | _____ | 1,2-Dichlorobenzene         | ND     |
| _____ | 1,1,1-Trichloroethane     | ND     | _____ | 1,4-Dichlorobenzene         | ND     |
| _____ | Carbon Tetrachloride      | ND     |       |                             |        |
| _____ | Bromodichloromethane      | ND     |       |                             |        |
| _____ | 1,2-Dichloropropane       | ND     |       |                             |        |
| _____ | trans-1,3-Dichloropropene | ND     |       |                             |        |

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Analytical Serv

REPORT

LAB # 86-02-041

Continued From Above

Results by Sample

SAMPLE ID 860135

FRACTION 06A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/06/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

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\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID 860135

FRACTION 06C TEST CODE GC 602 NAME EPA Method 602/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/11/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_VERIFIED BY MCL  
COMPOUNDS DETECTED 0

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

2 442

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID field blank

FRACTION 07A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/06/86

Category

DATA FILE  
CONC. FACTOR

G

DATE INJECTED 02/12/86

ANALYST  
INSTRUMENT

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
|      | Chloromethane             | ND     |      | Trichloroethene             | ND     |
|      | Bromomethane              | ND     |      | Dibromochloromethane *      | ND     |
|      | Vinyl Chloride            | ND     |      | 1,1,2-Trichloroethane *     | ND     |
|      | Chloroethane              | ND     |      | cis-1,3-Dichloropropene *   | ND     |
|      | Methylene Chloride        | ND     |      | 2-Chloroethylvinyl Ether    | ND     |
|      | Trichlorofluoromethane    | ND     |      | Bromoform                   | ND     |
|      | 1,1-Dichloroethene        | ND     |      | 1,1,2,2-Tetrachloroethane # | ND     |
|      | 1,1-Dichloroethane        | ND     |      | Tetrachloroethylene #       | ND     |
|      | trans-1,2-Dichloroethene  | ND     |      | Chlorobenzene               | ND     |
|      | Chloroform                | ND     |      | 1,3-Dichlorobenzene         | ND     |
|      | 1,2-Dichloroethane        | ND     |      | 1,2-Dichlorobenzene         | ND     |
|      | 1,1,1-Trichloroethane     | ND     |      | 1,4-Dichlorobenzene         | ND     |
|      | Carbon Tetrachloride      | ND     |      |                             |        |
|      | Bromodichloromethane      | ND     |      |                             |        |
|      | 1,2-Dichloropropene       | ND     |      |                             |        |
|      | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-041

Continued From Above

SAMPLE ID field blankFRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GCDate & Time Collected 02/06/86

Category \_\_\_\_\_

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

#Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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RECEIVED: 02/07/86  
Analytical Serv  
Results by Sample  
REPORT  
LAB # 86-02-041  
SAMPLE ID field blank  
FRACTION 07B  
TEST CODE GC 602  
NAME EPA Method 602/GC  
Date & Time Collected 02/06/86  
Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/11/86  
CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| 1     | Toluene       | 2.19 ; | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.  
SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-041

Results by Sample

SAMPLE ID trip blank

FRACTION 08A

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected not specified

Category

DATA FILE  
CONC. FACTOR

G

DATE INJECTED 02/12/86

ANALYST  
INSTRUMENTMCL  
gVERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
|      | Chloromethane             | ND     |      | Trichloroethene             | ND     |
|      | Bromomethane              | ND     |      | Dibromochloromethane *      | ND     |
|      | Vinyl Chloride            | ND     |      | 1,1,2-Trichloroethane *     | ND     |
|      | Chloroethane              | ND     |      | cis-1,3-Dichloropropene *   | ND     |
|      | Methylene Chloride        | ND     |      | 2-Chloroethylvinyl Ether    | ND     |
| 1    | Trichlorofluoromethane    | 3.00   |      | Bromoform                   | ND     |
|      | 1,1-Dichloroethene        | ND     |      | 1,1,2,2-Tetrachloroethane # | ND     |
|      | 1,1-Dichloroethane        | ND     |      | Tetrachloroethylene #       | ND     |
|      | trans-1,2-Dichloroethene  | ND     |      | Chlorobenzene               | ND     |
|      | Chloroform                | ND     |      | 1,3-Dichlorobenzene         | ND     |
|      | 1,2-Dichloroethane        | ND     |      | 1,2-Dichlorobenzene         | ND     |
|      | 1,1,1-Trichloroethane     | ND     |      | 1,4-Dichlorobenzene         | ND     |
|      | Carbon Tetrachloride      | ND     |      |                             |        |
|      | Bromodichloromethane      | ND     |      |                             |        |
|      | 1,2-Dichloropropane       | ND     |      |                             |        |
|      | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-041

Continued From Above

SAMPLE ID trip blank

FRACTION 08A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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 Analytical Serv REPORT  
 Results by Sample

LAB # 86-02-041

SAMPLE ID trip blank  
 FRACTION Q8A TEST CODE GC 602 NAME EPA Method 602/GC  
 Date & Time Collected not specified Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/12/86 ANALYST \_\_\_\_\_ MCL VERIFIED BY MCL  
 CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 0

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.  
 SCAN = scan number or retention time on chromatogram.  
 All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-041

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |     |   |        |
|-----|---|--------|-----|---|--------|
| 01B | : | DUP601 | 01D | : | DUP602 |
| 02B | : | DUP601 | 02D | : | DUP602 |
| 03B | : | DUP601 | 03D | : | DUP602 |
| 04B | : | DUP601 | 04D | : | DUP602 |
| 05B | : | DUP601 | 05D | : | DUP602 |
| 06B | : | DUP601 | 06D | : | DUP602 |

PAGE 1

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Analytical Serv

REPORT

03/01/86 01:31:01

LAB # 86-02-044

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CLIENT PLANT 4 SAMPLES 6  
COMPANY General Dynamics  
FACILITY OEHL Plant 4, Bldg 4  
Austin, Texas

WORK ID General Dynamics Plant 4  
TAKEN 2/7/86 Neil Robinson  
TRANS Fed Ex 321175105  
TYPE H2O  
P.O. # 212-027-27-40  
INV. # 7453

CONTACT FRENCH

*Lucas A. Poter*  
CERTIFIED BY

Duplicate of report of 02/28/86.

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

01 860136 H2O  
02 860137 H2O  
03 860138 H2O  
04 860139 H2O  
05 860140 H2O  
06 Reagent Blank 625

## Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MSNS S GCMS Characterization-ABN  
MS 608 Pesticides & PCBs by GC/MS

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RECEIVED: 02/08/86

Analytical Serv REPORT  
RESULTS BY TEST

LAB # 86-02-044

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| EX 625        | 02/10/86        | 02/10/86        | 02/10/86        | 02/10/86        | 02/10/86        |
| date complete |                 |                 |                 |                 |                 |

| TEST CODE     | Sample 06       |
|---------------|-----------------|
| default units | (entered units) |
| EX 625        | 02/10/86        |
| date complete |                 |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860136 H20

FRACTION 01A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C01

DATE EXTRACTED 02/10/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/23/86

INSTRUMENT

WJL

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

2 4 5 2

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 480 AS1   | d5-phenol            | 54     |
| 364 AS2   | 2-fluorophenol       | 36     |
| 1112 AS3  | 2,4,6-tribromophenol | 37     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID 860136 H2O

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 02/07/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860136 H20

FRACTION 01A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/07/86

Category

DATA FILE 2CU02044C01

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/24/86

INSTRUMENT F2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1662   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1322   | 68B | di-butyl phthalate         | 2      |
| 45B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860136 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 88  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 60B BS1   | d5-nitrobenzene 76  |
| 891 BS2   | 2-fluorobiphenyl 62 |
| 1480 BS3  | d14-terphenyl 66    |
| BS4       | d10-biphenyl        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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SAMPLE ID 860136 H20

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

FRACTION 01A TEST CODE M625 B NAME Method 625 Base/Neutrals  
Date & Time Collected 02/07/86 Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860136 H20

FRACTION 01A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/07/86

Category

CHRO # 2U02Q44C01

SAMPLE SIZE 1

DATE ANALYZED 02/25/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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Analytical Serv  
Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860136 H2u

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C01  
CONC. FACTOR

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/23/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

NO-A190 442

INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

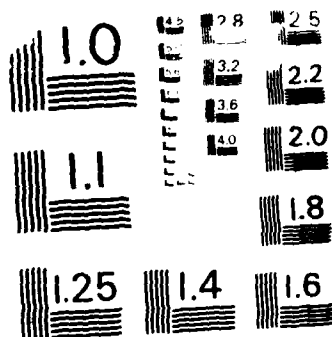
57

**UNCLASSIFIED**

**F/G 24/7**

NL

A 10x10 grid of squares, with the top-left square missing, forming a shape resembling a staircase or a corner.



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860136 H20

FRACTION Q1A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860137 H2O

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C02  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/25/86

ANALYST  
INSTRUMENT

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 480 AS1   | d5-phenol            | 59     |
| 353 AS2   | 2-fluorophenol       | 58     |
| 1114 AS3  | 2,4,6-tribromophenol | 63     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID 860137 H20

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/08/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860137 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C02

DATE EXTRACTED 02/10/86

ANALYST

INSTRUMENT

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT

WJL

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1665   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1324   | 68B | di-butyl phthalate         | 4      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860137 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 608 BS1   | d5-nitrobenzene 114 |
| 892 BS2   | 2-fluorobiphenyl 76 |
| 1492 BS3  | d14-terphenyl 73    |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860137 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860137 H2O

FRACTION 02A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/07/86

Category

CHRO # 2U02044C02

SAMPLE SIZE 1

DATE ANALYZED 02/23/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCBs

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RECEIVED: 02/08/86

Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860137 H20

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

DATA FILE 2000204C02

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/23/86

WJL

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860137 H20

FRACTION Q2A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category                     

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C03

DATE EXTRACTED 02/10/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/23/86

WJL

COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 483 65A | phenol                     | 3      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 481 AS1   | d5-phenol            | 72     |
| 362 AS2   | 2-fluorophenol       | 24     |
| 1115 AS3  | 2,4,6-tribromophenol | 73     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/07/86

Category

DATA FILE 2CU0204C03

DATE EXTRACTED 02/10/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1666   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1325   | 68B | di-butyl phthalate         | 3      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

|       |     |                             |    |     |     |                        |    |
|-------|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B   | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B   | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B   | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B   | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B   | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 2 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B   | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B   | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>609</u> BS1  | d5-nitrobenzene <u>110</u> |
| <u>884</u> BS2  | 2-fluorobiphenyl <u>80</u> |
| <u>1493</u> BS3 | d14-terphenyl <u>44</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A (enzo(a)anthracene and chrysene co-elute) high concentrations.

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Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H2U

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860138 H2O

FRACTION Q3A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/07/86

Category

CHRD # 2U02044C03

SAMPLE SIZE 1

DATE ANALYZED 02/23/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCBs

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860138 H20

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C03

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/23/86

WJL

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860138 H20

FRACTION 03A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860139 H2O

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C04  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/25/86

ANALYST WJL  
INSTRUMENT F2

VERIFIED BY LK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 482 AS1   | d5-phenol            | 5      |
| 368 AS2   | 2-fluorophenol       | 2      |
| AS3       | 2,4,6-tribromophenol |        |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

A1 results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID 860139 H2O

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/07/86

Category

DATA FILE 2CU02044C04

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/25/86

INSTRUMENT F2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1664   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1323   | 68B | di-butyl phthalate         | 2      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene A               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

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SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>607</u> BS1  | d5-nitrobenzene <u>116</u> |
| <u>821</u> BS2  | 2-fluorobiphenyl <u>84</u> |
| <u>1481</u> BS3 | d14-terphenyl <u>66</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A, enzo(a)anthracene and chrysene co-elute high concentrations.

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REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CORC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-044

SAMPLE ID 860139 H20

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/07/86 Category

CHRD # 2U02044C04  
SAMPLE SIZE 1

DATE ANALYZED 02/23/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044C04  
CONC. FACTOR

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/25/86

ANALYST MJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860139 H20

FRACTION 04A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

DATA FILE 2CU02044CQ5  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/25/86

ANALYST  
INSTRUMENT

WJL  
F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 485 65A | phenol                     | 3      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT    |
|-----------------|----------------------|-----------|
| <u>483</u> AS1  | d5-phenol            | <u>98</u> |
| <u>365</u> AS2  | 2-fluorophenol       | <u>26</u> |
| <u>1115</u> AS3 | 2,4,6-tribromophenol | <u>40</u> |
| AS4             | d3-phenol            |           |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID 860140 H2O

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/07/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-044

SAMPLE ID 860140 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

DATA FILE 2CU0204C03

DATE EXTRACTED 02/10/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/23/86

INSTRUMENT

F2

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 1666   | 66B | bis(2-ethylhexyl)phthalate | 2      |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1323   | 68B | di-butyl phthalate         | 4      |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |

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Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

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## SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 610 BS1   | d5-nitrobenzene 99  |
| 893 BS2   | 2-fluorobiphenyl 84 |
| 1493 BS3  | d14-terphenyl 56    |
| BS4       | d10-biphenyl        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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Results by Sample

REPORT

LAB # 86-02-044

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SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/07/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/07/86

Category

CHRD # 2U02044C03

SAMPLE SIZE 1

DATE ANALYZED 02/23/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID 860140 H20

FRACTION 05A

TEST CODE MS 608

NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 02/07/86

Category

DATA FILE 2CU02044C03

DATE EXTRACTED 02/10/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/23/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |



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Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID 860140 H2O

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/07/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category                     

DATA FILE 2CU0203BC06  
CONC. FACTOR 1

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/24/86

ANALYST                       
INSTRUMENT                     

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE       | COMPOUND             | RESULT                      |
|-----------------|----------------------|-----------------------------|
| <u>477</u> AS1  | d5-phenol            | <u>70</u>                   |
| <u>360</u> AS2  | 2-fluorophenol       | <u>100</u>                  |
| <u>1114</u> AS3 | 2,4,6-tribromophenol | <u>39</u>                   |
| AS4             | d3-phenol            | <u>                    </u> |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

| DATA FILE 2EB02078C06 |     | DATE EXTRACTED 02/10/86     |        | ANALYST    |     | WJL                        |        | VERIFIED BY LAK      |  |
|-----------------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|----------------------|--|
| CONC. FACTOR 1        |     | DATE INJECTED 02/24/86      |        | INSTRUMENT |     | F2                         |        | COMPOUNDS DETECTED 0 |  |
| NPDES SCAN            | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |                      |  |
| 1B                    | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |                      |  |
| 4B                    | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |                      |  |
| 46B                   | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |                      |  |
| 33B                   | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |                      |  |
| 36B                   | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |                      |  |
| 11B                   | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |                      |  |
| 16B                   | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |                      |  |
| 20B                   | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |                      |  |
| 21B                   | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |                      |  |
| 22B                   | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |                      |  |
| 23B                   | 28B | 3,3'dichlorobenzidine       | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |                      |  |
| 27B                   | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |                      |  |
| 28B                   | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |                      |  |
| 29B                   | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |                      |  |
| 31B                   | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |                      |  |
| 17B                   | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene R               | ND     |                      |  |

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Results by Sample

REPORT

LAB # 86-02-044

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SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

|     |     |                             |           |     |     |                        |           |
|-----|-----|-----------------------------|-----------|-----|-----|------------------------|-----------|
| 148 | 41B | 4-bromophenyl phenyl ether  | <u>ND</u> | 8B  | 79B | benzo(ghi)perylene     | <u>ND</u> |
| 128 | 42B | bis(2-chloroisopropyl)ether | <u>ND</u> | 32B | 80B | fluorene               | <u>ND</u> |
| 108 | 43B | bis(2-chloroethoxy)methane  | <u>ND</u> | 44B | 81B | phenanthrene B         | <u>ND</u> |
| 348 | 52B | hexachlorobutadiene         | <u>ND</u> | 19B | 82B | dibenzo(a,h)anthracene | <u>ND</u> |
| 358 | 53B | hexachlorocyclopentadiene   | <u>ND</u> | 37B | 83B | indeno(1,2,3-cd)pyrene | <u>ND</u> |
| 388 | 54B | isophorone                  | <u>ND</u> | 45B | 84B | pyrene                 | <u>ND</u> |
| 398 | 55B | naphthalene                 | <u>ND</u> |     |     |                        |           |
| 408 | 56B | nitrobenzene                | <u>ND</u> |     |     |                        |           |

## SURROGATE RECOVERIES

| SCAN CODE       | RESULT                         |
|-----------------|--------------------------------|
| <u>606</u> BS1  | d5-nitrobenzene <u>73</u>      |
| <u>892</u> BS2  | 2-fluorobiphenyl <u>41</u>     |
| <u>1480</u> BS3 | d14-terphenyl <u>47</u>        |
| BS4             | d10-biphenyl <u>          </u> |

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## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A benzo(a)anthracene and chrysene co-elute high concentrations.

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Results by Sample

REPORT

LAB # 86-02-044

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-044

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

CHRO # 2802038C06

SAMPLE SIZE 1

DATE ANALYZED 02/24/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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 SAMPLE ID Reagent Blank 625  
 Analytical Serv  
 REPORT  
 Results by Sample  
 LAB # 86-02-044  
 FRACTION 06A  
 TEST CODE MS 608  
 NAME Pesticides & PCBs by GC/MS  
 Date & Time Collected not specified  
 Category \_\_\_\_\_

DATA FILE 2EB02038C06  
 CONC. FACTOR \_\_\_\_\_  
 DATE EXTRACTED 02/10/86  
 DATE INJECTED 02/24/86

ANALYST WJL  
 VERIFIED BY LAK  
 COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |



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Analytical Serv

REPORT

LAB # 86-02-044

Results by Sample

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-044

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

02B : DUP\_NS  
03B : DUP\_NS  
04B : DUP\_NS  
05B : DUP\_NS

PAGE 1  
RECEIVED 02/08/86  
Analytical Serv  
04/01/86 17:16:52  
REPORT  
LAB # 86-02-047

REPORT Radian  
TO BL 4  
Austin  
ATTEN Larry Fren h  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd  
P O Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

*Carl Smith*  
CERTIFIED BY

CONTACT CONOVER

WORK ID groundwater  
TAKEN AM, NR  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

Unknown compound eluting here.  
Second column confirmation performed for EPA 601 on  
-01, -02, -03, -04.

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

e Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

01 860136  
02 860137  
03 860138  
04 860139  
05 860140  
06 field blank  
07 trip blank

Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs  
AS GA Arsenic, low level  
BA E Barium, ICPEs  
CD E Cadmium, ICPEs  
CR E Chromium, ICPEs  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

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Analytical Serv

REPORT

LAB # 86-02-047

RESULTS BY TEST

| TEST CODE               | Sample 01<br>(entered units) | Sample 02<br>(entered units) | Sample 03<br>(entered units) | Sample 04<br>(entered units) | Sample 05<br>(entered units) |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| AG_E<br>ug/ml           | 0.006*                       | 0.007*                       | 0.004*                       | 0.015                        | 0.019                        |
| AS_GA<br>ug/ml          | <.005                        | <.005                        | <.005                        | 0.075                        | 0.007*                       |
| BA_E<br>ug/ml           | 0.099                        | 0.15                         | 0.10                         | 0.52                         | 0.077                        |
| CD_E<br>ug/ml           | <.002                        | <.002                        | <.002                        | <.002                        | <.002                        |
| CR_E<br>ug/ml           | 0.018*                       | 0.042                        | 0.007*                       | 0.031                        | 0.050                        |
| DG3020<br>date complete | 02/12/86                     | 02/12/86                     | 02/12/86                     | 02/12/86                     | 02/12/86                     |
| DG6010<br>date complete | 02/20/86                     | 02/20/86                     | 02/20/86                     | 02/20/86                     | 02/20/86                     |
| HC_IR<br>mg/L           | <1.0                         |                              |                              |                              | <1.0                         |
| HG_GA<br>ug/ml          | <.0002                       | 0.0002*                      | 0.0002*                      | <.0002                       | <.0002                       |
| QNG_IR<br>mg/L          | <1.0                         |                              |                              |                              | <1.0                         |
| PB_GA<br>ug/ml          | 0.025                        | 0.018                        | 0.004*                       | 0.008*                       | 0.20                         |
| SE_GA<br>ug/ml          | <.003                        | <.003                        | <.003                        | <.003                        | <.003                        |

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Analytical Serv REPORT

RECEIVED: 02/08/86

Results by Sample

SAMPLE ID 860136

FRACTION 01A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/07/86

Category

DATA FILE B DATE INJECTED 02/12/86  
CONC. FACTOR       

ANALYST        RP b VERIFIED BY MCL  
INSTRUMENT        COMPOUNDS DETECTED 2

| SCAN          | COMPOUND                  | RESULT      | SCAN          | COMPOUND                    | RESULT      |
|---------------|---------------------------|-------------|---------------|-----------------------------|-------------|
| <u>      </u> | Chloromethane             | <u>ND</u>   | <u>2</u>      | Trichloroethene             | <u>7211</u> |
| <u>      </u> | Bromomethane              | <u>ND</u>   | <u>      </u> | Dibromochloromethane *      | <u>ND</u>   |
| <u>      </u> | Vinyl Chloride            | <u>ND</u>   | <u>      </u> | 1,1,2-Trichloroethane *     | <u>ND</u>   |
| <u>      </u> | Chloroethane              | <u>ND</u>   | <u>      </u> | cis-1,3-Dichloropropene *   | <u>ND</u>   |
| <u>      </u> | Methylene Chloride        | <u>ND</u>   | <u>      </u> | 2-Chloroethylvinyl Ether    | <u>ND</u>   |
| <u>      </u> | Trichlorofluoromethane    | <u>ND</u>   | <u>      </u> | Bromoform                   | <u>ND</u>   |
| <u>      </u> | 1,1-Dichloroethene        | <u>ND</u>   | <u>      </u> | 1,1,2,2-Tetrachloroethane # | <u>ND</u>   |
| <u>      </u> | 1,1-Dichloroethane        | <u>ND</u>   | <u>      </u> | Tetrachloroethylene #       | <u>ND</u>   |
| <u>1</u>      | trans-1,2-Dichloroethene  | <u>288^</u> | <u>      </u> | Chlorobenzene               | <u>ND</u>   |
| <u>      </u> | Chloroform                | <u>ND</u>   | <u>      </u> | 1,3-Dichlorobenzene         | <u>ND</u>   |
| <u>      </u> | 1,2-Dichloroethane        | <u>ND</u>   | <u>      </u> | 1,2-Dichlorobenzene         | <u>ND</u>   |
| <u>      </u> | 1,1,1-Trichloroethane     | <u>ND</u>   | <u>      </u> | 1,4-Dichlorobenzene         | <u>ND</u>   |
| <u>      </u> | Carbon Tetrachloride      | <u>ND</u>   | <u>      </u> |                             |             |
| <u>      </u> | Bromodichloromethane      | <u>ND</u>   | <u>      </u> |                             |             |
| <u>      </u> | 1,2-Dichloropropane       | <u>ND</u>   | <u>      </u> |                             |             |
| <u>      </u> | trans-1,3-Dichloropropene | <u>ND</u>   | <u>      </u> |                             |             |

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Analytical Serv  
Results by Sample  
REPORT  
LAB # 86-02-047  
Continued From Above  
FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/07/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

RECEIVED: 02/08/86

Results by Sample

SAMPLE ID 860136

FRACTION Q1C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/07/86

Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/11/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 0

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

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All results reported in \_\_\_\_\_ ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv REPORT

RECEIVED: 02/08/86

Results by Sample

SAMPLE ID 860137

FRACTION 02A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/07/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/12/86

CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_

INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL

COMPOUNDS DETECTED 2

| SCAN  | COMPOUND                  | RESULT | SCAN  | COMPOUND                    | RESULT |
|-------|---------------------------|--------|-------|-----------------------------|--------|
| _____ | Chloromethane             | ND     | 2     | Trichloroethene             | 36.6   |
| _____ | Bromomethane              | ND     | _____ | Dibromochloromethane *      | ND     |
| _____ | Vinyl Chloride            | ND     | _____ | 1,1,2-Trichloroethane *     | ND     |
| _____ | Chloroethane              | ND     | _____ | cis-1,3-Dichloropropene *   | ND     |
| _____ | Methylene Chloride        | ND     | _____ | 2-Chloroethylvinyl Ether    | ND     |
| _____ | Trichlorofluoromethane    | ND     | _____ | Bromoform                   | ND     |
| _____ | 1,1-Dichloroethene        | ND     | _____ | 1,1,2,2-Tetrachloroethane # | ND     |
| _____ | 1,1-Dichloroethane        | ND     | _____ | Tetrachloroethylene #       | ND     |
| 1     | trans-1,2-Dichloroethene  | 54.2^  | _____ | Chlorobenzene               | ND     |
| _____ | Chloroform                | ND     | _____ | 1,3-Dichlorobenzene         | ND     |
| _____ | 1,2-Dichloroethane        | ND     | _____ | 1,2-Dichlorobenzene         | ND     |
| _____ | 1,1,1-Trichloroethane     | ND     | _____ | 1,4-Dichlorobenzene         | ND     |
| _____ | Carbon Tetrachloride      | ND     |       |                             |        |
| _____ | Bromodichloromethane      | ND     |       |                             |        |
| _____ | 1,2-Dichloropropane       | ND     |       |                             |        |
| _____ | trans-1,3-Dichloropropene | ND     |       |                             |        |



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 REPORT  
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 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/07/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

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Results by Sample

SAMPLE ID 860137

FRACTION 02C TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/07/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/11/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
 CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   | —    |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-047

SAMPLE ID 860138

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/07/86

Category

DATA FILE B DATE INJECTED 02/12/86  
CONC. FACTOR

ANALYST RP VERIFIED BY MCL  
INSTRUMENT b COMPOUNDS DETECTED 1

| SCAN | COMPOUND                        | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------------|--------|------|-----------------------------|--------|
|      | Chloromethane                   | ND     |      | Trichloroethene             | ND     |
|      | Bromomethane                    | ND     |      | Dibromochloromethane *      | ND     |
|      | Vinyl Chloride                  | ND     |      | 1,1,2-Trichloroethane *     | ND     |
|      | Chloroethane                    | ND     |      | cis-1,3-Dichloropropene *   | ND     |
|      | Methylene Chloride              | ND     |      | 2-Chloroethylvinyl Ether    | ND     |
|      | Trichlorofluoromethane          | ND     |      | Bromoform                   | ND     |
|      | 1,1-Dichloroethene              | ND     |      | 1,1,2,2-Tetrachloroethane # | ND     |
|      | 1,1-Dichloroethane              | ND     |      | Tetrachloroethylene #       | ND     |
| 1    | trans-1,2-Dichloroethene 63459^ |        |      | Chlorobenzene               | ND     |
|      | Chloroform                      | ND     |      | 1,3-Dichlorobenzene         | ND     |
|      | 1,2-Dichloroethane              | ND     |      | 1,2-Dichlorobenzene         | ND     |
|      | 1,1,1-Trichloroethane           | ND     |      | 1,4-Dichlorobenzene         | ND     |
|      | Carbon Tetrachloride            | ND     |      |                             |        |
|      | Bromodichloromethane            | ND     |      |                             |        |
|      | 1,2-Dichloropropane             | ND     |      |                             |        |
|      | trans-1,3-Dichloropropene       | ND     |      |                             |        |

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 Results by Sample  
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 FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/07/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

SAMPLE ID 860138

FRACTION 03C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/07/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/11/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

SAMPLE ID 860139

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/07/86

Category

DATA FILE \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_

DATE INJECTED 02/13/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_MCL \_\_\_\_\_  
COMPOUNDS DETECTED 2

VERIFIED BY MCL

| SCAN  | COMPOUND                  | RESULT | SCAN  | COMPOUND                    | RESULT |
|-------|---------------------------|--------|-------|-----------------------------|--------|
| _____ | Chloromethane             | ND     | 2     | Trichloroethene             | 4484   |
| _____ | Bromomethane              | ND     | _____ | Dibromochloromethane *      | ND     |
| _____ | Vinyl Chloride            | ND     | _____ | 1,1,2-Trichloroethane *     | ND     |
| _____ | Chloroethane              | ND     | _____ | cis-1,3-Dichloropropene *   | ND     |
| _____ | Methylene Chloride        | ND     | _____ | 2-Chloroethylvinyl Ether    | ND     |
| _____ | Trichlorofluoromethane    | ND     | _____ | Bromoform                   | ND     |
| _____ | 1,1-Dichloroethene        | ND     | _____ | 1,1,2,2-Tetrachloroethane # | ND     |
| _____ | 1,1-Dichloroethane        | ND     | _____ | Tetrachloroethylene #       | ND     |
| 1     | trans-1,2-Dichloroethene  | 1054   | _____ | Chlorobenzene               | ND     |
| _____ | Chloroform                | ND     | _____ | 1,3-Dichlorobenzene         | ND     |
| _____ | 1,2-Dichloroethane        | ND     | _____ | 1,2-Dichlorobenzene         | ND     |
| _____ | 1,1,1-Trichloroethane     | ND     | _____ | 1,4-Dichlorobenzene         | ND     |
| _____ | Carbon Tetrachloride      | ND     |       |                             |        |
| _____ | Bromodichloromethane      | ND     |       |                             |        |
| _____ | 1,2-Dichloropropane       | ND     |       |                             |        |
| _____ | trans-1,3-Dichloropropene | ND     |       |                             |        |

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Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

Continued From Above

SAMPLE ID 860139

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/07/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Results by Sample

LAB # 86-02-047

SAMPLE ID 860139

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/07/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/11/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED \_\_\_\_\_ 0

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND            | RESULT |
|-------|---------------|--------|-------|---------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1,4-Dichlorobenzene | ND     |
| _____ | Toluene       | ND ;   | _____ | 1,3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1,2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   |       |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-047

SAMPLE ID 860140

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/07/86

Category

| DATA FILE    | B                         | DATE INJECTED | 02/13/86 | ANALYST                     | RP     | VERIFIED BY        | MCL |
|--------------|---------------------------|---------------|----------|-----------------------------|--------|--------------------|-----|
| CONC. FACTOR |                           |               |          | INSTRUMENT                  | b      | COMPOUNDS DETECTED | 0   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                    | RESULT |                    |     |
|              | Chloromethane             | ND            |          | Trichloroethene             | ND     |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane *      | ND     |                    |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane *     | ND     |                    |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene *   | ND     |                    |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether    | ND     |                    |     |
|              | Trichlorofluoromethane    | ND            |          | Bromoform                   | ND     |                    |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane # | ND     |                    |     |
|              | 1,1-Dichloroethane        | ND            |          | Tetrachloroethylene #       | ND     |                    |     |
|              | trans-1,2-Dichloroethene  | ND            |          | Chlorobenzene               | ND     |                    |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene         | ND     |                    |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene         | ND     |                    |     |
|              | 1,1,1-Trichloroethane     | ND            |          | 1,4-Dichlorobenzene         | ND     |                    |     |
|              | Carbon Tetrachloride      | ND            |          |                             |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                             |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                             |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                             |        |                    |     |

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 Results by Sample  
 REPORT  
 LAB # 86-02-047  
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 SAMPLE ID 860140  
 FRACTION 05A  
 TEST CODE GC 601  
 NAME EPA Method 601/GC  
 Date & Time Collected 02/07/86  
 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

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 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-047

SAMPLE ID 860140

FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/07/86 Category

DATA FILE D DATE INJECTED 02/11/86  
CONC. FACTOR 1

ANALYST RP VERIFIED BY MCL  
INSTRUMENT d COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND     | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 3.48   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND     | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND     |      |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

SAMPLE ID field blank

FRACTION 06A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

|              |                           |               |          |                             |        |                    |     |
|--------------|---------------------------|---------------|----------|-----------------------------|--------|--------------------|-----|
| DATA FILE    | B                         | DATE INJECTED | 02/13/86 | ANALYST                     | RP     | VERIFIED BY        | MCL |
| CONC. FACTOR |                           |               |          | INSTRUMENT                  | b      | COMPOUNDS DETECTED | 0   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                    | RESULT |                    |     |
|              | Chloromethane             | ND            |          | Trichloroethane             | ND     |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane *      | ND     |                    |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane *     | ND     |                    |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene *   | ND     |                    |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether    | ND     |                    |     |
|              | Trichlorofluoromethane    | ND            |          | Bromoform                   | ND     |                    |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane # | ND     |                    |     |
|              | 1,1-Dichloroethane        | ND            |          | Tetrachloroethylene #       | ND     |                    |     |
|              | trans-1,2-Dichloroethene  | ND            |          | Chlorobenzene               | ND     |                    |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene         | ND     |                    |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene         | ND     |                    |     |
|              | 1,1,1-Trichloroethane     | ND            |          | 1,4-Dichlorobenzene         | ND     |                    |     |
|              | Carbon Tetrachloride      | ND            |          |                             |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                             |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                             |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                             |        |                    |     |

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 Analytical Serv  
 Results by Sample  
 LAB # 86-02-047  
 Continued From Above  
 SAMPLE ID field blank  
 FRACTION 06A  
 TEST CODE GC 601  
 NAME EPA Method 601/GC  
 Date & Time Collected not specified  
 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv REPORT

RECEIVED: 02/08/86

Results by Sample

SAMPLE ID field blank

FRACTION 06B TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE \_\_\_\_\_ DATE INJECTED 02/11/86

CONC FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP

VERIFIED BY MCL

INSTRUMENT \_\_\_\_\_ d

COMPOUNDS DETECTED 1

| SCAN  | COMPOUND      | RESULT | SCAN  | COMPOUND             | RESULT |
|-------|---------------|--------|-------|----------------------|--------|
| _____ | Benzene       | ND ;   | _____ | 1, 4-Dichlorobenzene | ND     |
| 1     | Toluene       | 4.06 ; | _____ | 1, 3-Dichlorobenzene | ND     |
| _____ | Ethyl Benzene | ND ;   | _____ | 1, 2-Dichlorobenzene | ND     |
| _____ | Chlorobenzene | ND ;   | _____ |                      |        |

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv  
Results by Sample

LAB # 86-02-047

SAMPLE ID trip blank

FRACTION 07A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

| DATA FILE    | B                         | DATE INJECTED | 02/12/86 | ANALYST                     | RP     | VERIFIED BY        | MCL |
|--------------|---------------------------|---------------|----------|-----------------------------|--------|--------------------|-----|
| CONC. FACTOR |                           |               |          | INSTRUMENT                  | b      | COMPOUNDS DETECTED | 1   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                    | RESULT |                    |     |
|              | Chloromethane             | ND            |          | Trichloroethene             | ND     |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane *      | ND     |                    |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane *     | ND     |                    |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene *   | ND     |                    |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether    | ND     |                    |     |
| 1            | Trichlorofluoromethane    | 2.75          |          | Bromoform                   | ND     |                    |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane # | ND     |                    |     |
|              | 1,1-Dichloroethane        | ND            |          | Tetrachloroethylene #       | ND     |                    |     |
|              | trans-1,2-Dichloroethene  | ND            |          | Chlorobenzene               | ND     |                    |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene         | ND     |                    |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene         | ND     |                    |     |
|              | 1,1,1-Trichloroethane     | ND            |          | 1,4-Dichlorobenzene         | ND     |                    |     |
|              | Carbon Tetrachloride      | ND            |          |                             |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                             |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                             |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                             |        |                    |     |

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 Analytical Serv Results by Sample  
 REPORT  
 LAB # 86-02-047  
 Continued From Above  
 SAMPLE ID trip blank  
 FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected not specified Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in mg/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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Analytical Serv

REPORT

LAB # 86-02-047

Results by Sample

SAMPLE ID trip blank

FRACTION 07A

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/12/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| —    | Toluene       | ND ;   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   | —    |                     |        |

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-047

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |     |   |        |     |   |        |
|-----|---|--------|-----|---|--------|-----|---|--------|
| 01B | : | DUP601 | 01D | : | DUP602 | 01H | : | DUP_NS |
| 02B | : | DUP601 | 02D | : | DUP602 |     |   |        |
| 03B | : | DUP601 | 03D | : | DUP602 |     |   |        |
| 04B | : | DUP601 | 04D | : | DUP602 |     |   |        |
| 05B | : | DUP601 | 05D | : | DUP602 | 05H | : | DUP_NS |

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Analytical Serv

REPORT

LAB # 86-02-058

09/08/86 12:02:12

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766

CERTIFIED BY

ATTEN  
PHONE (512) 454-4797

CONTACT FRENCH

CLIENT PLANT 4 SAMPLES 3  
COMPANY General Dynamics  
FACILITY DEHL Plant 4, Bldg 4  
Austin, Texas

WORK ID General Dynamics Ft. Worth  
TAKEN 2/10/86  
TRANS Federal 321175142  
TYPE H2O  
P.O. # 212-027-27-40  
INV. # 7454

Duplicate of report of 02/28/86.

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 B60141  
02 B60143  
03 B60144  
04 B60146  
05 duplicate analysis BNA  
05 matrix spike BNA  
05 reagent blank 625

## Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MSNS S GCMS Characterization-ABN  
MS 608 Pesticides & PCBs by GC/MS

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Analytical Serv  
RESULTS BY TEST

LAB # 86-02-058

| TEST CODE     | Sample 01       | Sample 02       | Sample 03       | Sample 04       | Sample 05       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| default units | (entered units) | (entered units) | (entered units) | (entered units) | (entered units) |
| EX 625        | 02/12/86        | 02/12/86        | 02/12/86        | 02/12/86        | 02/12/86        |
| date complete |                 |                 |                 |                 |                 |
|               |                 |                 |                 |                 |                 |
|               |                 |                 |                 |                 |                 |
|               |                 |                 |                 |                 |                 |

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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID 860141

FRACTION Q1A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date &amp; Time Collected 02/10/86

Category

DATA FILE 2CU02058C01

DATE EXTRACTED 02/12/86

DATE INJECTED 02/26/86

ANALYST

INSTRUMENT

WJL

F2

VERIFIED BY LAK

COMPOUNDS DETECTED 1

CONC. FACTOR 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 47B 65A | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 476 AS1   | d5-phenol            | 60     |
| 355 AS2   | 2-fluorophenol       | 65     |
| 1115 AS3  | 2,4,6-tribromophenol | 67     |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860141

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID 860141

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

DATA FILE 2CU0205BC01  
CONC. FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/26/86

ANALYST WJL  
INSTRUMENT F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA  | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|------|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B  | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B  | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B  | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B  | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B  | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 1325 | di-butyl phthalate         | 2 BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B  | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B  | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B  | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B  | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B  | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B  | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B  | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B  | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B  | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B  | anthracene B               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860141

FRACTION Q1A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2 530

SURROGATE RECOVERIES

| SCAN CODE | RESULT              |
|-----------|---------------------|
| 607 BS1   | d5-nitrobenzene 83  |
| 883 BS2   | 2-fluorobiphenyl 71 |
| 1483 BS3  | d14-terphenyl 46    |
| BS4       | d10-biphenyl        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860141

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID 860141

FRACTION 01A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/10/86 Category

CHRD # 2U02058C01  
SAMPLE SIZE 1

VERIFIED BY LAK

UNITS ug/l

DATE ANALYZED 02/26/86

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID 860141

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/10/86 Category

DATA FILE 26U02038601  
CONC. FACTOR

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/26/86

ANALYST MJL

VERIFIED BY AK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860141

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/10/86

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID 860143

FRACTION 02A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 02/10/86 Category

DATA FILE 2CU02058C02  
CONC. FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/26/86

ANALYST  
INSTRUMENT

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA     | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|---------|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A     | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A     | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A     | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A     | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 48Q 65A | phenol                     | 3      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |         |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 47B AS1   | d5-phenol            | 63     |
| 35B AS2   | 2-fluorophenol       | 68     |
| 111B AS3  | 2,4,6-tribromophenol | 43     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860143

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-05B

SAMPLE ID 860143

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected 02/10/86

Category

DATA FILE 2CU02038C02

DATE EXTRACTED 02/12/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

INSTRUMENT

WJL

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860143

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

2  
5  
38

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>60B</u> BS1  | d5-nitrobenzene <u>74</u>  |
| <u>88A</u> BS2  | 2-fluorobiphenyl <u>64</u> |
| <u>148A</u> BS3 | d14-terphenyl <u>74</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.



**KADIAN  
CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860143

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

FRACTION 02A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/10/86

Category

CHRD # 2U02038C02

SAMPLE SIZE 1

DATE ANALYZED 02/26/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

PAZ 1/  
RECEIVED 02/11/86

Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID 860143

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/10/86

Category

DATA FILE 20U02038C02

DATE EXTRACTED 02/12/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/26/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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SAMPLE ID 860143

Analytical Serv  
Results by Sample

REPORT  
LAB # 86-02-058  
Continued From Above

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/10/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.  
All results reported in micrograms/liter unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID 860144

FRACTION Q3A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 02/10/86 Category

DATA FILE 2CU02058CQ3  
CONC. FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/26/86

ANALYST  
INSTRUMENT

WJL  
F2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 38A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 477 | phenol                     | 2      |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 472 AS1   | d3-phenol            | 69     |
| 353 AS2   | 2-fluorophenol       | 74     |
| 1116 AS3  | 2,4,6-tribromophenol | 59     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860144

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

SAMPLE ID 860144

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

DATA FILE 2CU02058C03

DATE EXTRACTED 02/12/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

INSTRUMENT

M/JL

COMPOUNDS DETECTED 2

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES | SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|-------|------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B   | 61B  | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B   | 62B  | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B   | 63B  | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B   | 166B | 66B | bis(2-ethylhexyl)phthalate | 2 BL   |
| 36B        | 12B | hexachloroethane            | ND     | 15B   | 67B  | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B   | 132B | 68B | di-butyl phthalate         | 2 BL   |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B   | 69B  | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B   | 70B  | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B   | 71B  | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B    | 72B  | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B    | 73B  | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B    | 74B  | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B    | 75B  | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B   | 76B  | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B    | 77B  | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B    | 78B  | 78B | anthracene B               | ND     |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860144

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>607</u> BS1  | d5-nitrobenzene <u>94</u>  |
| <u>884</u> BS2  | 2-fluorobiphenyl <u>80</u> |
| <u>1484</u> BS3 | d14-terphenyl <u>51</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.



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REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860144

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

FRACTION 03A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/10/86

Category

CHRO # 2302038503

SAMPLE SIZE 1

DATE ANALYZED 02/26/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCBs

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

SAMPLE ID 860144

FRACTION 03A

TEST CODE MS 608

NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 02/10/86

Category

DATA FILE 2CU02058C03

DATE EXTRACTED 02/12/86

ANALYST MJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/26/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

**MACAMVIA  
CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

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SAMPLE ID 860144

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/10/86

Category \_\_\_\_\_

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

SAMPLE ID 860146

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category

DATA FILE 2CU02038C04

DATE EXTRACTED 02/12/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

ANALYST WJL

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

## SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 478 AS1   | d5-phenol            | 62     |
| 358 AS2   | 2-fluorophenol       | 91     |
| 1116 AS3  | 2,4,6-tribromophenol | 46     |
| AS4       | d3-phenol            |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID 860146

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/10/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID 860146

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

DATA FILE 2CU02058C04  
CONC. FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86

ANALYST  
INSTRUMENT

WJL  
F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

| NPDES SCAN | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| 1B         | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B         | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B        | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B        | 9B  | hexachlorobenzene           | ND     | 13B 166Z   | 66B | bis(2-ethylhexyl)phthalate | 6 BL   |
| 36B        | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B        | 18B | bis(2-chloroethyl)ether     | ND     | 26B        | 68B | di-butyl phthalate         | ND     |
| 16B        | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B        | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B        | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B        | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B        | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B        | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B        | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B        | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B        | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B        | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860146

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 88  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE           | RESULT                     |
|---------------------|----------------------------|
| <del>60B</del> 8S1  | d5-nitrobenzene <u>60</u>  |
| <del>88A</del> 8S2  | 2-fluorobiphenyl <u>56</u> |
| <del>148B</del> 8S3 | d14-terphenyl <u>64</u>    |
| 8S4                 | d10-biphenyl               |

DEFINITIONS FOR THIS REPORT

ANALYST: [blank] or retention time on chromatogram.  
 RESULTS reported in ug/l unless otherwise specified.  
 Method used: EPA detection limit method 625, (Federal Register, 10/26/84).  
 Fluoranthene and benzo(k)fluoranthene co-elute.  
 Anthracene and chrysene co-elute in high concentrations.



AD-A198 442

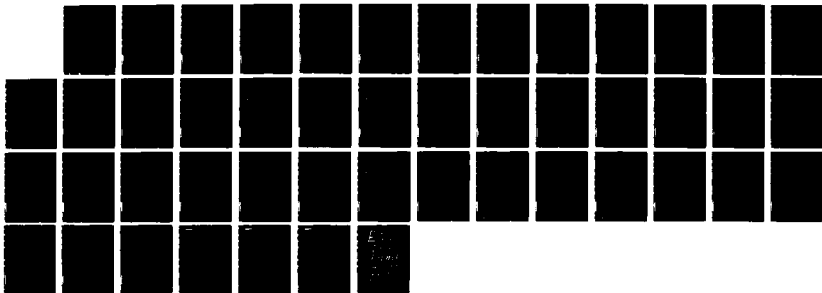
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

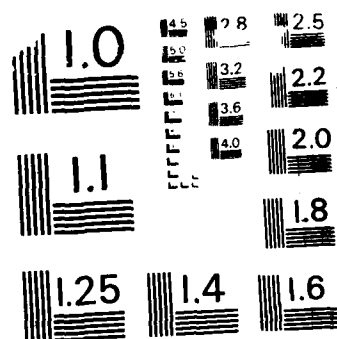
7/7

UNCLASSIFIED

F/G 24/7

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MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS - 1963 -

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Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860146

FRACTION 04A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/10/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

SAMPLE ID 860146

FRACTION 04A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/10/86

Category

CHRD # 2002058C04

SAMPLE SIZE 1

DATE ANALYZED 02/26/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCBs

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REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID 860146

FRACTION 04A

TEST CODE MS 608 NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 02/10/86

Category

DATA FILE 26U02038C04

DATE EXTRACTED 02/12/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/26/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID 860146

FRACTION 04A

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/10/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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REPORT

Results by Sample

LAB # 86-02-058

SAMPLE ID duplicate analysis BNA

FRACTION 058

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 2CD02058C03

DATE EXTRACTED 02/12/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

ANALYST

INSTRUMENT

COMPOUNDS DETECTED Q

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 479 AS1   | 43-phenol            | 73     |
| 361 AS2   | 2-fluorophenol       | 79     |
| 1114 AS3  | 2,4,6-tribromophenol | 70     |
| AS4       | 43-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID duplicate analysis BNA

FRACTION 058

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

SAMPLE ID duplicate analysis BNA

FRACTION 05B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

| DATA FILE 2CD02058C03 |     | DATE EXTRACTED 02/12/86     |        | ANALYST    |     | VERIFIED BY LAK            |        |
|-----------------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| CONC. FACTOR 1        |     | DATE INJECTED 02/26/86      |        | INSTRUMENT |     | COMPOUNDS DETECTED 1       |        |
| NPDES SCAN            | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
| 1B                    | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B                    | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B                   | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B                   | 9B  | hexachlorobenzene           | ND     | 13B        | 66B | bis(2-ethylhexyl)phthalate | ND     |
| 36B                   | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B                   | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1324   | 68B | di-butyl phthalate         | 4 BL   |
| 16B                   | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B                   | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B                   | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B                   | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B                   | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B                   | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B                   | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B                   | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B                   | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B                   | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |

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REPORT

LAB # 86-02-058

Results by Sample

Continued From Above

SAMPLE ID duplicate analysis BNA

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

**SURROGATE RECOVERIES**

| SCAN CODE       | RESULT                         |
|-----------------|--------------------------------|
| <u>607</u> BS1  | 45-nitrobenzene <u>98</u>      |
| <u>882</u> BS2  | 2-fluorobiphenyl <u>80</u>     |
| <u>1482</u> BS3 | d14-terphenyl <u>46</u>        |
| BS4             | d10-biphenyl <u>          </u> |

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID duplicate analysis BNA

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID duplicate analysis BNA

FRACTION 058

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category                     

CHRD # 2D02038C03

SAMPLE SIZE 1

DATE ANALYZED 02/26/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCBs

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Results by Sample

LAB # 86-02-058

SAMPLE ID duplicate analysis BNA

FRACTION 05B

TEST CODE MS 608 NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected not specified

Category

DATA FILE 2CD02058C03

DATE EXTRACTED 02/12/86

ANALYST MJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/26/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID duplicate analysis BNA

FRACTION 058

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

SAMPLE ID matrix spike BNAFRACTION 05ATEST CODE M625 A NAME Method 625 Acid CompoundsDate & Time Collected not specifiedCategory           DATA FILE 2CM02058C03DATE EXTRACTED 02/12/86ANALYST WJLVERIFIED BY LAKCONC. FACTOR 1DATE INJECTED 02/26/86INSTRUMENT F2COMPOUNDS DETECTED 11

| NPDES SCAN | EPA        | COMPOUND | RESULT                  | NPDES SCAN | EPA | COMPOUND    | RESULT |                            |            |
|------------|------------|----------|-------------------------|------------|-----|-------------|--------|----------------------------|------------|
| 11A        | <u>871</u> | 21A      | 2,4,6-trichlorophenol   | <u>87</u>  | 7A  | <u>1010</u> | 58A    | 4-nitrophenol              | <u>57</u>  |
| 8A         | <u>801</u> | 22A      | 4-chloro-3-methylphenol | <u>82</u>  | 5A  | <u>1001</u> | 59A    | 2,4-dinitrophenol          | <u>10</u>  |
| 1A         | <u>501</u> | 24A      | 2-chlorophenol          | <u>78</u>  | 4A  | <u>1089</u> | 60A    | 2-methyl-4,6-dinitrophenol | <u>140</u> |
| 2A         | <u>694</u> | 31A      | 2,4-dichlorophenol      | <u>82</u>  | 9A  | <u>1204</u> | 64A    | pentachlorophenol          | <u>260</u> |
| 3A         | <u>663</u> | 34A      | 2,4-dimethylphenol      | <u>57</u>  | 10A | <u>481</u>  | 65A    | phenol                     | <u>63</u>  |
| 6A         | <u>659</u> | 57A      | 2-nitrophenol           | <u>70</u>  |     |             |        |                            |            |

## SURROGATE RECOVERIES

| SCAN CODE   | COMPOUND | RESULT                         |
|-------------|----------|--------------------------------|
| <u>479</u>  | AS1      | d3-phenol <u>71</u>            |
| <u>360</u>  | AS2      | 2-fluorophenol <u>44</u>       |
| <u>1115</u> | AS3      | 2,4,6-tribromophenol <u>87</u> |
| AS4         |          | d3-phenol <u>          </u>    |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in % unless otherwise specified.

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Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category           

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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REPORT

Results by Sample

LAB # 86-02-058

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date &amp; Time Collected not specified

Category

DATA FILE 2CM02058C02

DATE EXTRACTED 02/12/86

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/26/86

INSTRUMENT

COMPOUNDS DETECTED 43

| NPDES SCAN | EPA  | COMPOUND | RESULT                      | NPDES SCAN | EPA | COMPOUND | RESULT |                            |    |
|------------|------|----------|-----------------------------|------------|-----|----------|--------|----------------------------|----|
| 1B         | 992  | 1B       | acenaphthene                | 63         | 41B | 210      | 61B    | N-nitrosodimethylamine     | 23 |
| 4B         | 1001 | 5B       | benzidine                   | 10         | 43B | 1094     | 62B    | N-nitrosodiphenylamine     | 77 |
| 46B        | 708  | 8B       | 1,2,4-trichlorobenzene      | 76         | 42B | 390      | 63B    | N-nitrosodi-n-propylamine  | 61 |
| 33B        | 1176 | 9B       | hexachlorobenzene           | 84         | 13B | 1667     | 66B    | bis(2-ethylhexyl)phthalate | 67 |
| 36B        | 601  | 12B      | hexachloroethane            | 69         | 15B | 1567     | 67B    | butyl benzyl phthalate     | 27 |
| 11B        | 493  | 18B      | bis(2-chloroethyl)ether     | 52         | 26B | 1325     | 68B    | di-butyl phthalate         | 60 |
| 16B        | 899  | 20B      | 2-chloronaphthalene         | 72         | 29B | 1794     | 69B    | di-n-octyl phthalate       | 53 |
| 20B        | 552  | 25B      | 1,2-dichlorobenzene         | 66         | 24B | 1062     | 70B    | diethyl phthalate          | 70 |
| 21B        | 522  | 26B      | 1,3-dichlorobenzene         | 67         | 25B | 952      | 71B    | dimethyl phthalate         | 68 |
| 22B        | 529  | 27B      | 1,4-dichlorobenzene         | 66         | 5B  | 1652     | 72B    | benzo(a)anthracene A       | 77 |
| 23B        | 1649 | 28B      | 3,3'-dichlorobenzidine      | 117        | 6B  | 1990     | 73B    | benzo(a)pyrene             | 79 |
| 27B        | 1024 | 35B      | 2,4-dinitrotoluene          | 81         | 7B  | 1892     | 74B    | benzo(b)fluoranthene *     | 73 |
| 28B        | 962  | 36B      | 2,6-dinitrotoluene          | 77         | 9B  | 1901     | 75B    | benzo(k)fluoranthene *     | 74 |
| 29B        |      | 37B      | 1,2-diphenylhydrazine       | NA         | 18B | 1662     | 76B    | chrysene A                 | 73 |
| 31B        | 1421 | 39B      | fluoranthene                | 78         | 2B  | 966      | 77B    | acenaphthylene             | 63 |
| 17B        | 1075 | 40B      | 4-chlorophenyl phenyl ether | 67         | 3B  | 1235     | 78B    | anthracene B               | 79 |

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Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

|     |      |     |                             |    |     |      |     |                        |    |
|-----|------|-----|-----------------------------|----|-----|------|-----|------------------------|----|
| 14B | 1132 | 41B | 4-bromophenyl phenyl ether  | 74 | 88  | 2558 | 79B | benzo(ghi)perylene     | 89 |
| 12B | 571  | 42B | bis(2-chloroisopropyl)ether | 61 | 32B | 1073 | 80B | fluorene               | 73 |
| 10B | 679  | 43B | bis(2-chloroethoxy)methane  | 61 | 44B | 1228 | 81B | phenanthrene B         | 73 |
| 34B | 746  | 52B | hexachlorobutadiene         | 78 | 19B | 2440 | 82B | dibenzo(a,h)anthracene | 98 |
| 35B |      | 53B | hexachlorocyclopentadiene   | ND | 37B | 2430 | 83B | indeno(1,2,3-cd)pyrene | 83 |
| 2   | 38B  | 646 | isophorone                  | 62 | 45B | 1458 | 84B | pyrene                 | 64 |
| 5   | 39B  | 717 | naphthalene                 | 61 |     |      |     |                        |    |
| 570 | 40B  | 611 | nitrobenzene                | 61 |     |      |     |                        |    |

SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>608</u> BS1  | d5-nitrobenzene <u>90</u>  |
| <u>884</u> BS2  | 2-fluorobiphenyl <u>72</u> |
| <u>1483</u> BS3 | d14-terphenyl <u>60</u>    |
| BS4             | d10-biphenyl               |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in X unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID Matrix spike BNA

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category           

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category                     

DATA FILE 2CM02038C03

DATE EXTRACTED 02/12/86

ANALYST HJL

VERIFIED BY LAK

CONC. FACTOR                     

DATE INJECTED 02/26/86

COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID matrix spike BNA

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category           

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 2CB02058C03  
CONC. FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86

ANALYST  
INSTRUMENT

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA | COMPOUND                | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
|------------|-----|-------------------------|--------|------------|-----|----------------------------|--------|
| 11A        | 21A | 2,4,6-trichlorophenol   | ND     | 7A         | 58A | 4-nitrophenol              | ND     |
| 8A         | 22A | 4-chloro-3-methylphenol | ND     | 5A         | 59A | 2,4-dinitrophenol          | ND     |
| 1A         | 24A | 2-chlorophenol          | ND     | 4A         | 60A | 2-methyl-4,6-dinitrophenol | ND     |
| 2A         | 31A | 2,4-dichlorophenol      | ND     | 9A         | 64A | pentachlorophenol          | ND     |
| 3A         | 34A | 2,4-dimethylphenol      | ND     | 10A        | 65A | phenol                     | ND     |
| 6A         | 57A | 2-nitrophenol           | ND     |            |     |                            |        |

SURROGATE RECOVERIES

| SCAN CODE | COMPOUND             | RESULT |
|-----------|----------------------|--------|
| 357 AS1   | d5-phenol            | 64     |
| 476 AS2   | 2-fluorophenol       | 61     |
| 1114 AS3  | 2,4,6-tribromophenol | 48     |
| AS4       | d3-phenol            |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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## Analytical Serv

## REPORT

Results by Sample

LAB # 86-02-058

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date &amp; Time Collected not specified

Category

| DATA FILE 2CB0205BC03 |     | DATE EXTRACTED 02/12/86     |        | ANALYST    |     | VERIFIED BY LAK            |        |
|-----------------------|-----|-----------------------------|--------|------------|-----|----------------------------|--------|
| CONC. FACTOR 1        |     | DATE INJECTED 02/27/86      |        | INSTRUMENT |     | COMPOUNDS DETECTED 2       |        |
| NPDES SCAN            | EPA | COMPOUND                    | RESULT | NPDES SCAN | EPA | COMPOUND                   | RESULT |
| 1B                    | 1B  | acenaphthene                | ND     | 41B        | 61B | N-nitrosodimethylamine     | ND     |
| 4B                    | 5B  | benzidine                   | ND     | 43B        | 62B | N-nitrosodiphenylamine     | ND     |
| 46B                   | 8B  | 1,2,4-trichlorobenzene      | ND     | 42B        | 63B | N-nitrosodi-n-propylamine  | ND     |
| 33B                   | 9B  | hexachlorobenzene           | ND     | 13B 167Q   | 66B | bis(2-ethylhexyl)phthalate | 3      |
| 36B                   | 12B | hexachloroethane            | ND     | 15B        | 67B | butyl benzyl phthalate     | ND     |
| 11B                   | 18B | bis(2-chloroethyl)ether     | ND     | 26B 1326   | 68B | di-butyl phthalate         | 3      |
| 16B                   | 20B | 2-chloronaphthalene         | ND     | 29B        | 69B | di-n-octyl phthalate       | ND     |
| 20B                   | 25B | 1,2-dichlorobenzene         | ND     | 24B        | 70B | diethyl phthalate          | ND     |
| 21B                   | 26B | 1,3-dichlorobenzene         | ND     | 25B        | 71B | dimethyl phthalate         | ND     |
| 22B                   | 27B | 1,4-dichlorobenzene         | ND     | 5B         | 72B | benzo(a)anthracene A       | ND     |
| 23B                   | 28B | 3,3'-dichlorobenzidine      | ND     | 6B         | 73B | benzo(a)pyrene             | ND     |
| 27B                   | 35B | 2,4-dinitrotoluene          | ND     | 7B         | 74B | benzo(b)fluoranthene *     | ND     |
| 28B                   | 36B | 2,6-dinitrotoluene          | ND     | 9B         | 75B | benzo(k)fluoranthene *     | ND     |
| 29B                   | 37B | 1,2-diphenylhydrazine       | ND     | 18B        | 76B | chrysene A                 | ND     |
| 31B                   | 39B | fluoranthene                | ND     | 2B         | 77B | acenaphthylene             | ND     |
| 17B                   | 40B | 4-chlorophenyl phenyl ether | ND     | 3B         | 78B | anthracene B               | ND     |



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Analytical Serv

REPORT

LAB # 86-02-058

Results by Sample

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date &amp; Time Collected not specified

Category

|     |     |                             |    |     |     |                        |    |
|-----|-----|-----------------------------|----|-----|-----|------------------------|----|
| 14B | 41B | 4-bromophenyl phenyl ether  | ND | 8B  | 79B | benzo(ghi)perylene     | ND |
| 12B | 42B | bis(2-chloroisopropyl)ether | ND | 32B | 80B | fluorene               | ND |
| 10B | 43B | bis(2-chloroethoxy)methane  | ND | 44B | 81B | phenanthrene B         | ND |
| 34B | 52B | hexachlorobutadiene         | ND | 19B | 82B | dibenzo(a,h)anthracene | ND |
| 35B | 53B | hexachlorocyclopentadiene   | ND | 37B | 83B | indeno(1,2,3-cd)pyrene | ND |
| 38B | 54B | isophorone                  | ND | 45B | 84B | pyrene                 | ND |
| 39B | 55B | naphthalene                 | ND |     |     |                        |    |
| 40B | 56B | nitrobenzene                | ND |     |     |                        |    |

## SURROGATE RECOVERIES

| SCAN CODE       | RESULT                     |
|-----------------|----------------------------|
| <u>604</u> BS1  | d5-nitrobenzene <u>86</u>  |
| <u>881</u> BS2  | 2-fluorobiphenyl <u>78</u> |
| <u>1484</u> BS3 | d14-terphenyl <u>82</u>    |
| BS4             | d10-biphenyl               |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
\* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-058

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# MACADAMIAN CORPORATION

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-058

SAMPLE ID reagent blank 625

FRACTION OSC TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected not specified Category

CHRD # 2802038C03  
SAMPLE SIZE 1

DATE ANALYZED 02/27/86 UNITS ug/l VERIFIED BY LAK

| SCAN | COMPOUND | RESULT | CONF LEVEL | REF CMPD |
|------|----------|--------|------------|----------|
|------|----------|--------|------------|----------|

No PCBs

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Analytical Serv  
Results by Sample

LAB # 86-02-058

SAMPLE ID reagent blank 625

FRACTION 05C TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected not specified Category

DATA FILE 2CB02038C03  
CONC. FACTOR

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

| NPDES SCAN | EPA  | COMPOUND           | RESULT | NPDES SCAN | EPA  | COMPOUND  | RESULT |
|------------|------|--------------------|--------|------------|------|-----------|--------|
| 1P         | 89P  | aldrin             | ND     | 2P         | 102P | alpha BHC | ND     |
| 10P        | 90P  | dieldrin           | ND     | 3P         | 103P | beta BHC  | ND     |
| 6P         | 91P  | chlordane          | ND     | 4P         | 104P | gamma BHC | ND     |
| 7P         | 92P  | 4,4'-DDT           | ND     | 5P         | 105P | delta BHC | ND     |
| 8P         | 93P  | 4,4'-DDE           | ND     | 18P        | 106P | PCB-1242  | ND     |
| 9P         | 94P  | 4,4'-DDD           | ND     | 19P        | 107P | PCB-1254  | ND     |
| 11P        | 95P  | alpha endosulfan   | ND     | 20P        | 108P | PCB-1221  | ND     |
| 12P        | 96P  | beta endosulfan    | ND     | 21P        | 109P | PCB-1232  | ND     |
| 14P        | 97P  | endosulfan sulfate | ND     | 22P        | 110P | PCB-1248  | ND     |
| 14P        | 98P  | endrin             | ND     | 23P        | 111P | PCB-1260  | ND     |
| 15P        | 99P  | endrin aldehyde    | ND     | 24P        | 112P | PCB-1016  | ND     |
| 16P        | 100P | heptachlor         | ND     | 25P        | 113P | toxaphene | ND     |
| 17P        | 101P | heptachlor epoxide | ND     |            |      |           |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-058

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 05C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category                     

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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REPORT

NonReported Work

LAB # 86-02-058

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |
|-----|---|--------|
| 01B | : | DUP_NS |
| 02B | : | DUP_NS |
| 03B | : | DUP_NS |
| 04B | : | DUP_NS |

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## Analytical Serv

## REPORT

LAB # 86-02-060

REPORT Radian  
TO BL 4  
Austin  
ATTEN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

*Carl Smith*  
CERTIFIED BY  
CONTACT CONOVER

WORK ID groundwater  
TAKEN NR, AM  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

\*\*Unknown compound eluting here.  
Second column confirmation performed for EPA 601 on -01, -02, -03, -05; for EPA 602 on -03.

### Footnotes and Comments

- \* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.
- @ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

### SAMPLE IDENTIFICATION

01 860141  
02 860142  
03 860143  
04 860145  
05 860146

### Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPE  
AS GA Arsenic, low level  
BA E Barium, ICPE  
CD E Cadmium, ICPE  
CR E Chromium, ICPE  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons in soil  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

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RECEIVED: 02/11/86  
Analytical Serv  
REPORT  
RESULTS BY TEST  
LAB # 86-02-060

| TEST CODE               | Sample 01<br>(entered units) | Sample 02<br>(entered units) | Sample 03<br>(entered units) | Sample 04<br>(entered units) | Sample 05<br>(entered units) |
|-------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| AG E<br>ug/ml           | <.002                        | 0.004*                       | <.002                        |                              | 0.006*                       |
| AS GA<br>ug/ml          | 0.002*                       | 0.007*                       | 0.005*                       |                              | <.002                        |
| BA E<br>ug/ml           | 0.068                        | 0.12                         | 0.021                        |                              | 0.040                        |
| CD E<br>ug/ml           | <.002                        | 0.003*                       | <.002                        |                              | <.002                        |
| CR E<br>ug/ml           | 0.005*                       | 0.034                        | 0.005*                       |                              | 0.006*                       |
| DC3020<br>date complete | 02/14/86                     | 02/14/86                     | 02/14/86                     |                              | 02/14/86                     |
| DC6010<br>date complete | 02/14/86                     | 02/14/86                     | 02/14/86                     |                              | 02/14/86                     |
| HC IR<br>ug/g           | <1.0<br>mg/L                 | <1.0<br>mg/L                 | <1.0<br>mg/L                 | 1.0<br>mg/L                  |                              |
| HG CA<br>ug/ml          | <.0002                       | <.0002                       | <.0002                       |                              | <.0002                       |
| ONG IR<br>mg/L          | <1.0                         | <1.0                         | <1.0                         |                              |                              |
| PB GA<br>ug/ml          | 0.033                        | 0.27                         | 0.040                        |                              | 0.028                        |
| SE GA<br>ug/ml          | 0.003*                       | <.002                        | <.002                        |                              | <.002                        |



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-060

SAMPLE ID 860141

FRACTION 01E

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/10/86

Category

DATA FILE 9 DATE INJECTED 02/12/86  
CONC. FACTOR       ANALYST        RP 9 VERIFIED BY MCL  
INSTRUMENT        COMPOUNDS DETECTED 4

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | 3    | Trichloroethene             | 0.93   |
| —    | Bromomethane              | ND     | 4    | Dibromochloromethane *      | 0.42   |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| —    | Methylene Chloride        | ND     | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| 1    | Chloroform                | 4.25   | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| 2    | Bromodichloromethane      | 1.87   |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-060

Continued From Above

SAMPLE ID 860141

FRACTION 01E

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 02/10/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-060

Results by Sample

SAMPLE ID 860141

FRACTION 01G TEST CODE GC 602 NAME EPA Method 602/GC

Date &amp; Time Collected 02/10/86

Category

DATA FILE

D

DATE INJECTED 02/11/86

ANALYST

RP

VERIFIED BY MCL

CONC. FACTOR

INSTRUMENT

d

COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND     | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 2.96   | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND     | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND     |      |                     |        |

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-060

SAMPLE ID 860142

FRACTION 02E TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/10/86

Category

DATA FILE \_\_\_\_\_ Q \_\_\_\_\_ DATE INJECTED 02/13/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ 9 \_\_\_\_\_ COMPOUNDS DETECTED 3

| SCAN | COMPOUND                  | RESULT | SCAN | COMPOUND                    | RESULT |
|------|---------------------------|--------|------|-----------------------------|--------|
| —    | Chloromethane             | ND     | 4    | Trichloroethene             | 0.92   |
| —    | Bromomethane              | ND     | 5    | Dibromochloromethane *      | 0.72   |
| —    | Vinyl Chloride            | ND     | —    | 1,1,2-Trichloroethane *     | ND     |
| —    | Chloroethane              | ND     | —    | cis-1,3-Dichloropropene *   | ND     |
| 1    | Methylene Chloride        | 0.74   | —    | 2-Chloroethylvinyl Ether    | ND     |
| —    | Trichlorofluoromethane    | ND     | —    | Bromoform                   | ND     |
| —    | 1,1-Dichloroethene        | ND     | —    | 1,1,2,2-Tetrachloroethane # | ND     |
| —    | 1,1-Dichloroethane        | ND     | —    | Tetrachloroethylene #       | ND     |
| —    | trans-1,2-Dichloroethene  | ND     | —    | Chlorobenzene               | ND     |
| 2    | Chloroform                | 3.79   | —    | 1,3-Dichlorobenzene         | ND     |
| —    | 1,2-Dichloroethane        | ND     | —    | 1,2-Dichlorobenzene         | ND     |
| —    | 1,1,1-Trichloroethane     | ND     | —    | 1,4-Dichlorobenzene         | ND     |
| —    | Carbon Tetrachloride      | ND     |      |                             |        |
| 3    | Bromodichloromethane      | 1.81   |      |                             |        |
| —    | 1,2-Dichloropropane       | ND     |      |                             |        |
| —    | trans-1,3-Dichloropropene | ND     |      |                             |        |

**RADIAN**  
CORPORATION

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RECEIVED: 02/11/86  
SAMPLE ID 860142

Analytical Serv  
Results by Sample

REPORT  
Continued From Above

LAB # 86-02-060

FRACTION 02E TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/10/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-060

SAMPLE ID 860142  
FRACTION 02G  
TEST CODE GC 602  
NAME EPA Method 602/GC  
Date & Time Collected 02/10/86  
Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/12/86 ANALYST \_\_\_\_\_ RP VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 0.90 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   | —    |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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 RECEIVED: 02/11/86      Results by Sample

SAMPLE ID 860143      FRACTION 03E      TEST CODE GC 601      NAME EPA Method 601/GC  
 Date & Time Collected 02/10/86      Category

| DATA FILE    | Q                         | DATE INJECTED | 02/13/86 | ANALYST                   | RP     | VERIFIED BY        | MCL |
|--------------|---------------------------|---------------|----------|---------------------------|--------|--------------------|-----|
| CONC. FACTOR |                           |               |          | INSTRUMENT                | 9      | COMPOUNDS DETECTED | 4   |
| SCAN         | COMPOUND                  | RESULT        | SCAN     | COMPOUND                  | RESULT |                    |     |
|              | Chloromethane             | ND            | 3        | Trichloroethene           | 6.40   |                    |     |
|              | Bromomethane              | ND            |          | Dibromochloromethane      | *      | ND                 |     |
|              | Vinyl Chloride            | ND            |          | 1,1,2-Trichloroethane     | *      | ND                 |     |
|              | Chloroethane              | ND            |          | cis-1,3-Dichloropropene   | *      | ND                 |     |
|              | Methylene Chloride        | ND            |          | 2-Chloroethylvinyl Ether  |        | ND                 |     |
|              | Trichlorofluoromethane    | ND            |          | Bromoform                 |        | ND                 |     |
|              | 1,1-Dichloroethene        | ND            |          | 1,1,2,2-Tetrachloroethane | #      | ND                 |     |
|              | 1,1-Dichloroethane        | ND            | 4        | Tetrachloroethylene       | #      | 0.17               |     |
| 1            | trans-1,2-Dichloroethene  | 0.15**        |          | Chlorobenzene             |        | ND                 |     |
|              | Chloroform                | ND            |          | 1,3-Dichlorobenzene       |        | ND                 |     |
|              | 1,2-Dichloroethane        | ND            |          | 1,2-Dichlorobenzene       |        | ND                 |     |
| 2            | 1,1,1-Trichloroethane     | 2.07          |          | 1,4-Dichlorobenzene       |        | ND                 |     |
|              | Carbon Tetrachloride      | ND            |          |                           |        |                    |     |
|              | Bromodichloromethane      | ND            |          |                           |        |                    |     |
|              | 1,2-Dichloropropane       | ND            |          |                           |        |                    |     |
|              | trans-1,3-Dichloropropene | ND            |          |                           |        |                    |     |

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 SAMPLE ID 860143  
 Analytical Serv  
 Results by Sample  
 REPORT  
 LAB # 86-02-060  
 Continued From Above  
 FRACTION 03E TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/10/86 Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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Analytical Serv  
Results by Sample

LAB # 86-02-060

SAMPLE ID 860143

FRACTION 03G TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/10/86 Category

DATA FILE D DATE INJECTED 02/12/86  
CONC. FACTOR         

ANALYST RP VERIFIED BY MCL  
INSTRUMENT d COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 10.4 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   | —    |                     |        |

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-060

SAMPLE ID 860146

FRACTION 05B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/10/86

Category

| DATA FILE _____    | G _____                         | DATE INJECTED 02/13/86 | ANALYST _____    | RP _____                    | VERIFIED BY MCL _____ |
|--------------------|---------------------------------|------------------------|------------------|-----------------------------|-----------------------|
| CONC. FACTOR _____ |                                 |                        | INSTRUMENT _____ | a _____                     | COMPOUNDS DETECTED 3  |
| SCAN               | COMPOUND                        | RESULT                 | SCAN             | COMPOUND                    | RESULT                |
| _____              | Chloromethane                   | ND                     | 2                | Trichloroethene             | 26.4                  |
| _____              | Bromomethane                    | ND                     | _____            | Dibromochloromethane *      | ND                    |
| _____              | Vinyl Chloride                  | ND                     | _____            | 1,1,2-Trichloroethane *     | ND                    |
| _____              | Chloroethane                    | ND                     | _____            | cis-1,3-Dichloropropene *   | ND                    |
| _____              | Methylene Chloride              | ND                     | _____            | 2-Chloroethylvinyl Ether    | ND                    |
| _____              | Trichlorofluoromethane          | ND                     | _____            | Bromoform                   | ND                    |
| _____              | 1,1-Dichloroethene              | ND                     | _____            | 1,1,2,2-Tetrachloroethane # | ND                    |
| _____              | 1,1-Dichloroethane              | ND                     | 3                | Tetrachloroethylene #       | 1.31                  |
| 1                  | trans-1,2-Dichloroethene 8.48** | ND                     | _____            | Chlorobenzene               | ND                    |
| _____              | Chloroform                      | ND                     | _____            | 1,3-Dichlorobenzene         | ND                    |
| _____              | 1,2-Dichloroethane              | ND                     | _____            | 1,2-Dichlorobenzene         | ND                    |
| _____              | 1,1,1-Trichloroethane           | ND                     | _____            | 1,4-Dichlorobenzene         | ND                    |
| _____              | Carbon Tetrachloride            | ND                     |                  |                             |                       |
| _____              | Bromodichloromethane            | ND                     |                  |                             |                       |
| _____              | 1,2-Dichloropropane             | ND                     |                  |                             |                       |
| _____              | trans-1,3-Dichloropropene       | ND                     |                  |                             |                       |

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Results by Sample

REPORT

LAB # 86-02-060

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SAMPLE ID 860146

FRACTION 05B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/10/86

Category

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\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-060

SAMPLE ID 860146

FRACTION 05D TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/10/86 Category

DATA FILE \_\_\_\_\_ DATE INJECTED 02/12/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_d COMPOUNDS DETECTED 1

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

| SCAN | COMPOUND      | RESULT | SCAN | COMPOUND            | RESULT |
|------|---------------|--------|------|---------------------|--------|
| —    | Benzene       | ND ;   | —    | 1,4-Dichlorobenzene | ND     |
| 1    | Toluene       | 4.13 ; | —    | 1,3-Dichlorobenzene | ND     |
| —    | Ethyl Benzene | ND ;   | —    | 1,2-Dichlorobenzene | ND     |
| —    | Chlorobenzene | ND ;   | —    |                     |        |

NOTES AND DEFINITIONS FOR THIS REPORT.

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REPORT

LAB # 86-02-060

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

|     |   |        |     |   |        |     |   |        |
|-----|---|--------|-----|---|--------|-----|---|--------|
| 01F | : | DUP601 | 01H | : | DUP602 | 01D | : | DUP_NS |
| 02F | : | DUP601 | 02H | : | DUP602 | 02D | : | DUP_NS |
| 03F | : | DUP601 | 03H | : | DUP602 | 03D | : | DUP_NS |
| 05C | : | DUP601 | 05E | : | DUP602 |     |   |        |

**RADIAN**  
CORPORATION

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MEMORANDUM

08 September 1986

RC No. 212-027-27-02

TO: Debra Richmann

FROM: Neal Amick *Neal Amick*

SUBJECT: Analysis of Soil and Water Samples for Methyl Ethyl Ketone - Air Force Plant #4

Soil and water samples were analyzed for MEK by EPA SW-846 Method 8015. A list of the samples and the results are presented in Table 1. Water samples were analyzed by direct injection into a gas chromatograph equipped with a flame ionization detector. The soil sample was analyzed by extracting with carbon disulfide and injecting an aliquot of the extract into the gas chromatograph.

For each day of analysis, a three-point calibration curve was determined by carefully preparing standard solutions of known concentrations. A quality control sample was independently prepared and analyzed to ensure accurate quantitation. The quality control sample was analyzed to be within 10% of the expected results for each day of analysis.

The extraction efficiency for the soil analysis was checked by spiking an aliquot of the soil with MEK and analyzing. A recovery of 89% was obtained. No sample had MEK concentrations above the minimum detection level, which was 1.0 ug/mL for the water samples and 1.0 ug/g for the soil samples.

The instrument parameters were set as follows:

|                   |  |
|-------------------|--|
| Instrument:       | Tracor 560 with FID                      |
| Column:           | 1% SP1000 on Carbopack B, 6' x 2 mm I.D. |
| Carrier Flow:     | N <sub>2</sub> at 20 cc/minute           |
| Oven Temperature: | 80°C programmed to 150°C at 10°C/minute  |

TABLE 1. ANALYTICAL RESULTS FOR METHYL ETHYL KETONE - AIR FORCE PLANT #4

## A. Water Samples

| Sample I.D. |         | Results (ug/mL) |
|-------------|---------|-----------------|
| 860129A     | HM - 74 | <1.0            |
| 860129B     | HM - 74 | <1.0            |
| 860168A     | HM - 72 | <1.0            |
| 860168B     | HM - 72 | <1.0            |
| 860173A     | HM - 75 | <1.0            |
| 860173B     | HM - 75 | <1.0            |
| 860199A     | HM - 73 | <1.0            |
| 860199B     | HM - 73 | <1.0            |

## B. Soil Samples

| Sample I.D. |           | Results (ug/g) |
|-------------|-----------|----------------|
| 860019      | HM - 106A | <1.0           |
| 860021A     | HM - 106C | <1.0           |
| 860021B     | HM - 106C | <1.0           |



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